This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

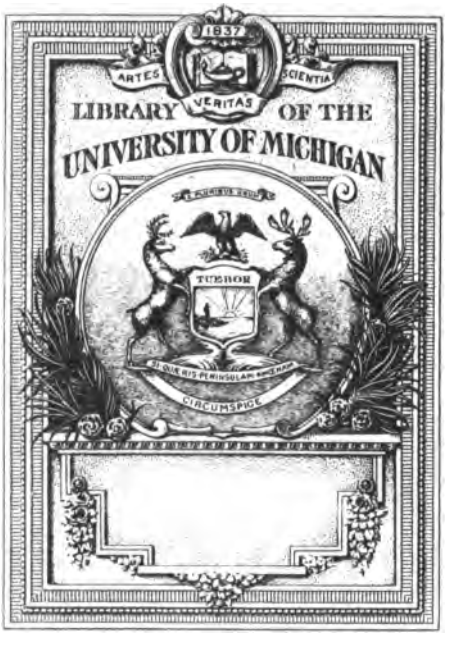
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`



THE GIFT OF
Detroit Public Libr.

610.5
037
58m

610.5
037
S8m

UNIV. OF MICH.

Thos M Bright

Thos. McEbright, M. D.

Was born near Carlisle, Cumberland County, Pa., April 14, 1824, of German and Scotch parentage. Removed with his parents to Wooster, Wayne County, Ohio, in the spring of 1833. His early life was spent on a farm, attending the district school during the winter months. At the age of 16 he attended the Academy of Norwalk, Ohio, afterwards entering the Ohio Wesleyan University, and here pursuing the classical course until the senior year, when his health gave out from nervous strain and overwork, and he was obliged to leave his class and return to the farm.

His health having improved by outdoor exercise, he began the study of medicine in the spring of 1847 with Dr. Timothy H. Baker, of Wooster, Ohio. Entered the Starling Medical College, of Columbus, Ohio, receiving the degree of Doctor of Medicine February 22, 1851.

He began the practice of his profession in Nashville, Holmes County, Ohio. In 1853 he married Miss Nancy Liggett, daughter of Judge Thomas Liggett, of Millersburg, Ohio. In the spring of 1857 he removed to Millersburg, where he was engaged in active practice until the fall of 1861, when he was appointed by Governor Dennison of Ohio, as Surgeon in charge of the 8th Ohio Vol. Inf., then stationed at Romney, Va., acting in capacity of Brigade Surgeon, and chief and operating Surgeon of his division, and served as such in the various engagements in which his Command in the Army of the Potomac was engaged. In the spring of 1863 he resigned by reason of ill health.

In May, 1864, he was appointed Colonel of the 166 Reg. Vol. Inft., but resigned in favor of H. G. Blake, preferring to act in capacity of Surgeon of same, which he did until the mustering out of his regiment in September, 1864. On November 19, of same year, he removed with his family to Akron, Ohio, where he has since been engaged in the active practice of his profession, being at present a member of the American Medical Association, the Ohio State, North-Eastern and Summit County Medical Societies, Surgeon of C., A. & C. R. R., and President of the Akron School Board, of which he has been a member over 14 years.

TRANSACTIONS

OF THE

FORTY-SECOND ANNUAL MEETING

OF THE

OHIO STATE

MEDICAL SOCIETY,

HELD AT

TOLEDO,

June 15th, 16th and 17th, 1887.

COLUMBUS, O.:
PRESS OF A. C. BERLIN & CO.
1887.

Detroit Public Lib.
gt
2-26-1926

OFFICERS FOR 1887-8.

SAMUEL F. FORBES, M. D., Toledo.....PRESIDENT
J. W. CRAIG, M. D., Mansfield.....VICE PRESIDENT
E. S. RICKETTS, M. D , Portsmouth .....VICE PRESIDENT
D. H. BRINKERHOFF, M. D., Fremont .....VICE PRESIDENT
A. B. CARPENTER, M. D., Cleveland ....VICE PRESIDENT
G. A. COLLAMORE, M. D., Toledo.... .....SECRETARY
E. C. BRUSH, M. D., Zanesville.....ASSISTANT SECRETARY
T. W. JONES, M. D., Columbus.....TREASURER AND LIBRARIAN

COMMITTEES.

FINANCE.

W. T. CORLETT, M. D., E. W. HOWARD, M. D., S. S. THORN, M. D.,
H. J. SHARP, M. D., G. S. FRANKLIN, M. D.

ETHICS.

C. L. VAN PELT, M. D., F. C. LARIMORE, M. D., DAN MILLIKEN, M. D.,
R. H. REED, M. D., W. J. SCOTT, M. D.

PUBLICATION.

J. RANSOHOFF, M. D., A. R. BAKER, M. D., W. H. H. NASH, M. D.,
W. J. CONKLIN, M. D., J. F. BALDWIN, M. D.

LEGISLATION.

D. C. WILSON, M. D., F. D. BAIN, M. D., H. J. DONAHOE, M. D.,
H. J. HERRICK, M. D., D. N. KINSMAN, M. D.

ADMISSIONS.

H. M. BROWN, M. D., A. W. RIDENOUR, M. D., P. P. POMERENE, M. D.,
C. A. L. REED, M. D., S. W. FOWLER, M. D.

FORTY-SECOND ANNUAL MEETING

OF THE

OHIO STATE MEDICAL SOCIETY,

HELD AT

TOLEDO, JUNE 15, 16, 17, 1887.

The Society was called to order at 2:30 o'clock, P. M., June 15, by the President, Dr. Thomas McEbright.

Prayer was offered by the Rev. Dr. F. B. DuVal.

The President of the Toledo Medical Association, Dr. J. T. Woods, gave an address of welcome in behalf of that Society and the profession of the county, as follows:

Mr. President and Gentlemen of Ohio State Medical Society:

It affords me much pleasure to give you welcome. I speak not for myself alone, but also for Toledo Medical Association, who, holding you to be their guests, feel honored by your presence, and have delegated to me the duty of presenting their most cordial greeting. Being co-workers, they appreciate your real worth; they know the value of your life efforts; the difficulties encountered; the toil to be endured, and the privations to be borne.

Our gratification is enhanced by the fact that the State Medical Society found one of its earliest and staunchest supporters in the Toledo Medical Association, this being the 37th year since their organization, during which period they have not faltered in their efforts to serve faithfully. As time cements friendships, and melts all interests into one, their duty becomes a delight, than which none can be higher than hospitality to honored guests.

You are distinguished medical men from all sections of the State, and can but represent the ripest study, thought and experience in medicine and surgery, and being wholly untrammeled by creed or dogma, are exponents of the law which governs all true progress, "Try all things, and hold fast that which is good."

The citizens of the goodly city of Toledo also welcome you most heartily, and will join with us in endeavor to fill with pleasures the time in which you are not engaged in actual society work.

We further unite in desiring that you make note of our city, that you may have a just conception of its real merits. It would be ill-timed and tedious to present you an inventory of our resources, our realizations and expectations—you will, however, allow me to make a single local observation: The early history of this locality cast over it a dense sanitary cloud, and that history is both well and widely understood; but it is not so well known that here, at least, "Old things have passed away and all things become new," that in all that pertains to the health of residents a change has been brought about, perfect and complete. This is demonstrable by the records, showing, as they do, that no city in the union presents a higher sanitary grade, a lower death percentage, than does the once derided Toledo.

Our railways and water ways are familiar to the world of trade, and on every hand you will hear the hum of machinery and see the hurried movement incident to earnest working.

With pride we point to the great number of cheerful and beautiful homes that adorn every street, go where you may within our limits, and Memorial Hall, in which your sessions are to be held, erected in honor of the living and to the memory of the dead who freely offered all that God gave them in the cause of our common country, is an evidence of the loyalty, the warmth and generosity of the hearts of our people.

I will only detain you farther to express for the Toledo Medical Association, and the citizens of the city, their hope that your sessions may be profitable, and that they may be able to make your stay so agreeable that you will "hunger and thirst" to come again.

The report of the Committee of Arrangements was presented by the Chaiman, Dr. W. C. Chapman.

The report of the Treasurer and Librarian, Dr. T. W. Jones, was read, as follows:

To the Ohio State Medical Society, I respectfully submit the following report as Treasurer, June 15, 1887:

Balance on hand June 2, '86, as reported at Akron.	$332.01
Received as Initiation Fees and Dues.	608.99
	$941.00

Contra:

Expended for use of Society since above date as follows:

H. J. Sharp, ...	$ 86.71	
G. A. Collamore, ...	113.22	
E. C. Brush	16.00	
Self, salary as Treasurer, 1885	75.00	
J. F. Baldwin	50.00	
Stamps	12.75	
Glenn, Printing	8.00	
H. Z. Gill	33.10	
Postage stamps	16.00	
Miner & Co.	22.50	
Nitschke Bros.	417.41	
Postage stamps	2.50	
Twine and wrapping paper	1.25	
Express Offices	40.50	
Postage stamps	1.50	
Hann & Adair	2.85	
Ex. Receipts	.67	
	$899.96	
Balance on hand.		$42.04

As Librarian, I report on hand Transactions of Society from 1858 inclusive to 1881, 100 copies; Trans. of '81 and '82, 110 copies; '83, no Trans. published; '84, but 6 copies left; '85, 16 copies on hand; '86, 105.

Transactions of other State societies for the past several years, in exchange for transactions of this Society, 110,

dating to the year '86; Reports of Boards of Health from different localities, quite a number; Constitution and By-Laws, 30 copies.

Transactions have been received from different State societies, during the present year, as follows: Georgia, Illinois, Missouri, Colorado, Minnesota, Wisconsin, Texas, Indiana, Michigan, Connecticut, New Jersey, Maryland, Mississippi, Tennessee, New Hampshire, Florida, Louisiana, West Virginia, Iowa, Alabama, Pennsylvania, Vermont and Rhode Island.

Respectfully,

T. W. JONES, *Treasurer.*

Referred to the Committee on Finance.

The Secretary submitted the following report:

Mr. President and Gentlemen:

According to my last report the Society numbered 557 members. This was an error of one, the correct number being 556. Up to the publication of the last volume of "Transactions" there had been additions of 44 new members, and 18 restored to membership by payment of dues, and a loss of 10 members by death and 82 by non-payment of dues, leaving a total of 526, or a net loss of 30 members.

The deaths reported during the past year are those of John W. Russell, of Mt. Vernon, President of this Society in 1862; William Morrow Beach, of London, President in 1886; L. J. Praehl, of Akron. Obituary notices of Drs. Praehl, Beach and Russell have been received.

The following Auxiliary Societies have deceased since last report: Delaware Co. Medical Association, Logan Co. Medical Society, Union Co. Medical Society and Fulton Co. Medical Society.

Annual Catalogues have been received from all Auxiliary societies.

I present herewith a protest from certain physicians in Scioto Co., against the recognition of the Scioto Co. Medical Society as an auxiliary, should such society make application for that purpose.

The following societies have made application to become

auxiliary; Monroe Co. Medical Society, and Academy of Medicine of Delaware County.

The following bills have been countersigned:

Salary of Treasurer and Librarian	$ 75.00
Salary of Secretary	75.00
Necessary expenses of Secretary, as per statement in last report	38.22
Expenses of Assistant Secretary	16.00
Honorarium to Editor of "Transactions"	50.00
Expenses of Committee on Board of Examiners Bill, approved by Committee on Finance	86.71
Expenses of Committee on Collective Investigation of Disease	33.10
Photo-Engraving, app'd by Com. on Publication	22.52
Printing "Transactions," app'd by Com. on Pub.	417.41

The necesssary expenses of the Secretary for the past year have been as follows:

Postage stamps, envelopes and Postal cards	$18.87
Printing	8.50
Stationery	.50
Telegram	.50
Messenger service	.40
	$28.77

In view of the fact that probably but few members of the Society possess a full set of the "Transactions," I would recommend, as a matter of interest and convenience for reference, that a list of the officers of this Society, and its places of meeting, from its foundation to the present time, be printed in our next volume of "Transactions."

Since the publication of the announcements, the titles of the following papers have been received: "Radical cure of Hernia," H. J. Herrick, Cleveland; "A Year's Experience in Abdominal Surgery," William D. Hamilton, Columbus.

Under the instructions of the Committee on Arrangements to procure a stenographer to report the proceedings of this meeting, I have secured the services of Messrs. Emery and Smith, of this city, for that purpose.

Respectfully submitted,

G. A. COLLAMORE, *Secretary.*

On motion, that portion of the Report referring to the publication of the names of past officers of the Society, etc., was referred to the Committee on Publication.

The Committee on Admissions was filled by the appointment of Dr. S. F. Forbes, *vice* A. W. Ridenour, and W. C. Chapman *vice* I. N. Himes, absent.

The Committee on Finance was filled by the appointment of Drs. H. M. Fisher, W. W. Jones, C. P. Landon, B. M. Ricketts, and Jona. Morris, *vice* members absent.

A report from Delegates to the American Medical Association was made by Dr. J. W. Hamilton, of Columbus.

A report from Delegates to the Michigan State Medical Society was made by Dr. W. W. Jones, of Toledo.

A paper was read by Dr. A. R. Baker, of Cleveland, on "The Eyesight and Hearing of Railroad Men."

Discussed by Drs. J. W. Hamilton, of Columbus, and J. H. Curry, of Toledo.

A paper was read by Dr. J. A. Wright, of Toledo, on "The Pathogenetic Relationship of Physical Conditions to Insanity."

The Committee on Finance presented the following report, which was adopted:

TOLEDO, OHIO, June 15, 1887.

To the Ohio State Medical Society:

The Finance Committee report that they have examined the books of the Treasurer and find:

Amount on hand last year at Akron	$332.01
Collected during the year	612.00
	$944.01
Paid out on vouchers	899.96
Now on hand	$ 44.05

There is an estimated indebtedness to officers for salaries and incidentals of $225.00.

The committee therefore recommend that the dues for this year be $2.00, and that $100.00 be appropriated as a donation to the International Medical Congress.

All of which is respectfully submitted.

H. M. FISHER,
W. W. JONES,
C. P. LANDON,
B. M. RICKETTS.

A paper was read by Dr. T. A. Reamy, of Cincinnati, on "Vaginal Hysterectomy."

Discussed by Drs. E. W. Jenks, of Detroit, Mich., J. W. Hamilton, of Columbus, W. H. Taylor, of Cincinnati, H. J. Herrick, A. B. Carpenter and A. F. House, of Cleveland, J. Harmon, of Warren and D. P. Chamberlin, of Toledo.

Society adjourned to 9 A. M., June 16.

SECOND DAY—MORNING SESSION.

The Society was called to order at 9 A. M., President McEbright in the chair.

The minutes of the previous session were read and adopted.

Dr. H. M. Fisher of Akron, offered the following resolution:

Resolved, That the Secretary of the Ohio State Medical Society be instructed to furnish blank applications for membership in the State Society to the Secretaries of all Auxiliary Societies, with instructions how to procure membership in the State Society.

After discussion by Drs. C. P. Landon and G. A. Collamore, the resolution was lost.

The Committee on Ethics was filled by the appointment of Drs. W. H. Philips *vice* F. C. Larimore, W. S. Battles *vice* D. Millikin, H. J. Herrick *vice* W. J. Scott and N. S. Everhard *vice* J. A. Murphy, absent.

The report of the Committee on the State Board of Medical Examiners Bill was presented by Dr. H. J. Sharp, and, after amendment, adopted:

Report of Special Committee on Legislation.

To the Ohio State Medical Society, Mr. President and Gentlemen:

When your Committee reported one year ago, we had reason to congratulate the medical profession in that if we had not then realized the full fruition of our endeavors as related to the Medical Examiners' Bill, we, at least, had together with other co-workers secured the enactment of a law to establish a State Board of Health, and believed that the sympathies of the medical profession of this State were in accord with the movement to procure the enactment of a law to establish a State Board of Medical Examiners. We then expressed the opinion that the passage of the bill then pending in the Senate could be secured, if the physicians in each county would interest themselves in it to the extent of explaining the purport of the proposed Act to their representatives, and endeavor to secure their support of the measure. Your Committee endeavored to awaken and keep up an interest among the profession by appealing to them through correspondence and circulars, and thus secured the aid of a large number of physicians in many places, and, as shown by the vote when the bill came up for passage in the Senate, our cause seemed ascendant. It will be remembered that the measure had been carried over from the session of the previous winter to a special day in January, early in the session of last winter. Your Committee had, through the medical constituents of Senators, secured their interest in the matter, and when the bill came up, there was a strong following in its favor and a warm discussion of its merits. After an entire day devoted to the measure it passed the Senate by a handsome majority—

21 to 11—I think. The passage of the bill by the Senate was the signal for the opening of the batteries of its opponents all along the line. These included the newspapers, the quacks and charlatans, and a few teachers in certain medical colleges.

Why the newspapers should have waged such an unmitigated and persistent fight against the measure, after its provisions were understood, unless they were subsidized by their patrons, the quacks, charlatans, pretenders, &c., or from pure cussedness, is past finding out. Their columns were ever open to the opponents of the bill for the most unreasonable tirades and unfair statements concerning it, while the friends of the measure could not secure a hearing with the exception, perhaps, of two or three papers, among which I take pleasure in naming the Columbus Record, which refuses to publish the advertisements of quacks or their nostrums or patent medicines.

Without further comment I may state that the efforts of the opponents of the bill were effective in working its defeat in the House, and here ends another chapter in the experience of your committee.

H. J. SHARP.

A paper was read by Dr. E. Conn of Akron, on "The Modus Operandi of Therapeutical Forces."

Society adjourned to 1:30 P. M.

SECOND DAY—AFTERNOON SESSION.

The Society was called to order at 2 P. M., the President in the chair.

The minutes of the previous session were read and approved.

The Committee on Publication submitted the following report:

COLUMBUS, O., June 12, 1887.

To the Ohio State Medical Society:

Your Committee on Publication met in Akron, June 3, 1886, and organized by electing Thos. McEbright Chair-

man. The rules of the committee as to reprints, engravings and the publication of papers in medical journals, were re-adopted for the current year.

It was decided that all the papers read at the meeting were worthy of publication.

Dr. J. F. Baldwin was elected Editor, and he with Dr. W. H. H. Nash were made a sub-committee to superintend the issuing of the *Transactions*.

The sub-committee asked for bids based on an estimate of 550 copies of 300 pages, with same quality of paper, type, and binding as in previous years, with fifty reprints, in paper covers, of each paper published. Bids were received as follows:

Ohio State Journal, (no reprints)	$319.00
Gazette Company	322.25
Nitschke Bros.	290.00
A. C. Berlin	308.25
Hann & Adair	329.00
Cleveland Medical Gazette	380.00

As the bid of Nitschke Bros. was the lowest, it was accepted, and the work was done in a satisfactory manner.

Early in the progress of the printing we found that our Treasury was sadly depleted, and that economy would be necessary. We accordingly decided to omit from Dr. Gill's article the two colored charts which he had prepared, as their reproduction would have cost from $75. to $100., while a plain table would give all the facts. Dr. Gill objected to this course, very vigorously, but we did not feel justified in running the Society into debt.

Dr. Wm. Morrow Beach, our lamented ex-president, furnished us with the necessary copies of his picture, at an expense to himself, aside from the engraving, of $25., which amount is still due his estate.

Respectfully submitted,

J. F. BALDWIN,

Chairman of Sub-Committee.

On motion of Dr. X. C. Scott, the report was adopted, and the money due the estate of the late Wm. Morrow Beach was ordered to be paid.

Dr. H. J. Herrick offered the following resolutions, which, on motion of Dr. A. B. Carpenter, were adopted without discussion, and the Secretary was instructed to forward copies of the same to the Governor, Secretary of State and members of the Legislature of the State:

WHEREAS, Our legislature has enacted statutes creating a State Board of Health, and in conformity with said enactments, His Excellency, Gov. Foraker, has selected men of intelligence, professional skill and integrity for the several positions on said Board; therefore,

Resolved, That the State Medical Society cordially endorses the spirit and labors of the Board of Health in its arduous duties.

Resolved, That we approve, and will individually cooperate with the Board in its purpose to diffuse the principles of sanitary science, by all means proposed, especially by distributing of tracts among the people, and special meetings for the enlightenment of the people on subjects of sanitary science.

Resolved, That we recommend that the Legislature so increase their power that they can enforce provisions for the maintainance of public health.

Dr. C. A. L. Reed offered the following resolution, which was adopted:

"*Resolved*, That the Secretary be, and is hereby instructed to furnish for publication in this year's "Transactions" the names, residences and schools of graduation of the physicians reported to him as members of the local societies auxiliary to the Ohio State Medical Society."

A motion that the Committee on State Board of Examiners' Bill be continued, was carried, after discussion by Drs. E. Sinnett and H. J. Herrick.

Vice President W. S. Battles took the chair and the President delivered his address.

The President then took the chair and the Society proceeded to the election of officers, which resulted as follows:

President—Samuel F. Forbes, Toledo.

1st Vice President—J. W. Craig, Mansfield.

2d Vice President—E. S. Ricketts, Portsmouth.

3d Vice President—D. H. Brinkerhoff, Fremont.

4th Vice President—A. B. Carpenter, Cleveland.

Secretary—G. A. Collamore, Toledo.

Assistant Secretary—E. C. Brush, Zanesville.

Treasurer and Librarian—T. W. Jones, Columbus.

Committee on Finance—W. T. Corlett, Cleveland, 5 *years.*

Committee on Ethics—C. L. Van Pelt, Toledo, 5 *years.*

Committee on Publication—J. Ransohoff, Cincinnati, 5 *years.*

Committee on Legislation—D. C. Wilson, Ironton, 5 *years.*

Committee on Admissions and Medical Societies—H. M. Brown, Hillsboro, 5 *years.*

The Committee on Admissions reported the application of Dr. C. H. Mills for membership, against which there was a protest appended, without recommendation.

On motion of Dr. X. C. Scott, it was referred to the Committee on Ethics.

After discussion it was voted that the Society meet in Columbus, on the second Wednesday of June, 1888.

A paper was read by Dr. A. E. Foltz, of Akron, on "One Day with Dr. Goodwin."

A paper was read by Dr. V. C. Vaughn, of Ann Arbor, Mich., on "The Relation between Tyrotoxicon and the Summer Diarrheas of Infancy."

On motion, a vote of thanks was presented to Dr. Vaughn and the paper referred to the Committee on Publication, with instructions to have the same printed in the "Transactions."

A paper was read by Dr. H. J. Herrick, of Cleveland, on "Radical Cure of Hernia."

Discussed by Drs. R. Harvey Reed, of Mansfield, A. Dunlap, of Springfield, and A. W. Ridenour, of Massillon.

A paper was read by Dr. C. A. L. Reed, of Hamilton, on "Pelvic Hematocele, Considered as a Consequence of Tubal Pregnancy, with Report of a Case."

Society adjourned to June 17th, 9 A. M.

THIRD DAY—MORNING SESSION.

The President called the Society to order at 9 A. M. The minutes of the last session were read and approved.

A paper was read by Dr. F. H. Darby, of Morrow, on "Medical Expert Testimony."

Discussed by Drs. J. W. Hamilton, of Columbus, W. C. Chapman, of Toledo, C. T. Benner, of Tiffin, and A. B. Carpenter, of Cleveland.

Dr. E. H. Hyatt offered the following resolution which was adopted:

"*Resolved*, That the question of Expert Medical Testimony be referred to a committee for the purpose of drafting appropriate resolutions, calling attention to the necessity of the enactment of proper legislation governing that subject."

The President appointed on this committee Drs. E. H. Hyatt, of Delaware, W. W. Jones, of Toledo, and R. Harvey Reed, of Mansfield.

A paper was read by Dr. W. T. Corlett, of Cleveland, on "Electrolysis in Dermatology."

A paper was read by Dr. S. F. Forbes, of Toledo, on "Amputation in Osteo-Cancer of the Limbs—with Cases."

Discussed by Dr. W. D. Hamilton, of Columbus.

A paper was read by Dr. R. B. Hall, of Chillicothe, on "Three Cases of Laparotomy."

A paper was read by Dr. W. D. Hamilton, of Columbus, on "A Year's Experience in Abdominal Surgery."

The special Committee on "Expert Medical Testimony" presented the following report:

Mr. President and Gentlemen:

The special committee appointed to inquire into the course of Dr. F. H. Darby, of Morrow, who was imprisoned by order of the Court of Common Pleas, of Warren county, Ohio, for refusing to give expert testimony without pay for such testimony—being a witness for the State, having heard a full and detailed statement of the circumstances of said case by Dr. Darby, beg leave to report that your committee, while in full sympathy with the doctor's course, deem it best to take said case under advisement, and, therefore, ask for further time.

E. H. Hyatt,
R. Harvey Reed,
W. W. Jones.

The request for further time was granted.

A paper was read by Dr. B. M. Ricketts, of Cincinnati, on "The Management of Eczema Infantile."

Discussed by Drs. W. T. Corlett, of Cleveland, and S. S. Thorn, of Toledo.

The President appointed Dr. W. J. Scott, of Cleveland, Chairman of the Committee on "General Collective Investigation of Disease," *vice* Dr. H. Z. Gill, *removed.*

Society adjourned to 1:30 P. M.

THIRD DAY—AFTEROON SESSION.

The Society was called to order at 2 P. M., by the President. The minutes of the last session were read and approved.

A paper was read by Dr. W. W. Jones, of Toledo, on "What are the Laws of Ohio Regulating the Practice of Medicine and Surgery? What Additions are needed to Protect the People of the State from Imposters?"

Dr. J. A. Wright offered the following resolution, which was adopted:

Resolved, That the members of this Society be each considered a committee of one to carry out the suggestions contained in the paper of Dr. W. W. Jones, and that the Secretary is authorized to print one thousand copies of the paper for distribution among the members, to aid them in influencing candidates for the Legislature in aid of the measure.

A paper was read by Dr. G. A. Collamore, of Toledo, on "Phytolacca Decandra."

A paper was read by Dr. R. Harvey Reed, of Mansfield, on "The Surgical Treatment of Chronic Follicular Pharyngitis."

Discussed by Dr. W. C. Chapman, of Toledo.

A paper was read by Dr. S. S. Thorn, of Toledo, on "Fractures of the Lower End of the Humerus."

Discussed by Drs. W. W. Jones and J. T. Lawless, of Toledo.

The following communication was read by the Secretary:

STATE MEDICAL SOCIETY OF WISCONSIN,
Secretary's Office, Appleton, Wis., Dec., 1886.

DEAR SIR:

At the last meeting of the State Medical Society of Wisconsin, held in Madison in June last, the following resolu-

tions with reference to the IMMIGRATION OF THE DEFECTIVE CLASSES were adopted, and a copy of the same is respectfully forwarded to you in accordance therewith.

WHEREAS, It is known that large numbers of foreigners belonging to the defective classes, such as paupers, criminals, the insane, deaf-mutes, blind, idiots and lepers, are annually shipped to this country from other nations;

That insanity, pauperism and crime are increasing rapidly in this country;

That the chief cause of this increase is due to the large numbers of defectives found among the "foreign born;"

That the foreign-born element constitutes but one-eghth of our population; yet this element furnishes one-third of our insane, one-third of our paupers, and one-third of our criminals; and

WHEREAS, The present national law is not sufficiently potent to guard against this indiscriminate immigration; and

WHEREAS, The individual States and Territories can not act independently,

Therefore, be it

Resolved, That the President of this Society be, and is hereby empowered to appoint at this session a committee of three of its members to act in the name of the Wisconsin State Medical Society in presenting a memorial to the next Legislature with urgent request that our Legislature take immediate steps to place the matter properly before Congress, which body alone must take final action; and

Resolved, That a copy of these resolutions be presented to each of our United States Senators, to each of our Congressmen, and to the President of each State Medical Society in the United States.

Very Respectfully,

S. C. JOHNSON, M. D., *Pres.*
J. T. REEVE, M. D., *Sec'y.*

Dr. R. H. Reed moved to adopt the above resolutions, substituting "Ohio" in place of "Wisconsin," and that the President appoint such a committee.

Mr. J. A. Wright, of Toledo, seconded the motion, and said:

Mr. President:—By reason of the public position that I occupy, I have reason to know that there is much truth in it. There are in the institution in which I am, a large number of insane persons of foreign derivation, and in addition to those which were sent to the institution after having become insane in this country, there are at least five or six known to have been insane in Germany and other portions of Europe, and to have been shipped in that condition, with the intention of ridding the governments to which they belong of that dependent class, and thus foist on our institutions those persons. I most heartily second the motion of the gentleman and hope it will prevail.

Carried.

On motion of Dr. A. W. Jones, consideration of the proposed amendments to the Constitution was postponed to the first session of the Annual Meeting in 1888.

The Committee on Ethics submitted the following report:

THE CHAIRMAN: I beg leave to report on the case of C. N. Mills. Upon examination, we find nothing for this committee to adjust. The facts are that Dr. Mills applied for membership in the usual way and was recommended by Drs. Hathaway and Nolen. The chief complaint seems to be that he graduated after attending two courses of lectures in the same year, and in the same college. While the committee say they regret that this is true, they do not see that it is in the nature of a forfeiture of his rights, and we refer it back to the Committee on Admissions.

DR. THORN: I wanted to get this morning to the meeting of that committee. I understand that I was one of the endorsers when he was made a member of the Northwestern Society. Such is not the fact. I did not endorse him then, and I decline to endorse him here.

THE CHAIRMAN: There was no such claim made that you endorsed him.

THE PRESIDENT: The question is on the report of the Committee on Ethics. They find nothing to adjust and refer it back to the Committee on Admissions.

DR. W. W. JONES: It would seem to me that if he was a member of the Northwestern Ohio Association, it would be a good plan to get a report from that Association; there is where it belongs. A large number of the members here say that he got in there surreptitiously. I don't know if that is true. I don't intend to charge that. They say he ought not to belong there. At the next meeting of the Society I presume the matter may be re-investigated. If it is proper, I suggest that it be referred back.

THE PRESIDENT: I don't think we have really anything further to do, except to refer it back to the Committee on Admissions.

Report adopted.

Dr. R. Harvey Reed presented the following resolution, which was adopted:

"*Resolved*, That the Society extend a vote of thanks to its President and officers, and to the members of the profession in Toledo, for the many courtesies that have been offered, as a result of which the meeting has been so successful."

The President appointed Drs. E. H. Hyatt, W. W. Jones and R. H. Reed, as the Committee proposed by the Wisconsin State Society.

All remaining papers were read by title.

The following is the consolidated report of the Commitee on Admissions and Medical Societies, which was adopted, and the following were elected members of the Society:

NAME.	P. O. ADDRESS.	WHERE GRADUATED.
Ash, William N	Toledo	Toledo Medical College
Belt, W. A	Kenton	Ohio Medical College
Bessey, J. Mortimer	Toledo	Howard University
Brown, H. H	Lyons	University of Michigan
Colvill, G. H	Harrisville	Columbus Medical College.
Conn, Eli	Akron	Wooster Univ'y Med. Dept.
De Vilbiss, Allen	Toledo	Miami Medical College
Hart, Samuel	Marietta	Bellevue Hosp. Med. Coll.
Hartman, G. W	Archbold	University of Michigan
Hinckley, H. D	Oxford	Ohio Medical College
Hixson, M. M	Dupont	Ohio Medical College
Ireland, W. E	WashingtonC.H.	Starling Medical College
Jones, John D	Cincinnati	Ohio Medical College
Kahle, A. W	Lima	Col. of Phys. & Surg., Balto.
Kahle, R. D	Lima	New York University
Keller, Thomas F	New Washington	Rush Medical College
Lathrop, A. B	Swanton	Bellevue Hosp. Med. Coll.
McClung, Jno. C	Leipsic	Western Reserve Med. Coll.
McGavran, S. B	Cadiz	Cleveland Medical College
McKinley, E. B	Vaughnsville	Starling Medical College
Maris, Clarence	Columbus	Starling Medical College
Reinhart, J. C	Toledo	Jefferson Medical College
Scott, R. E	Bowerston	Long Isl'd Hosp. Med. Coll.
Shaffner, Jno. F	Willshire	Ohio Medical Callege
Sherrard, A. C	Oakwood	Wooster Univ'y Med. Dept.
Sisler, L. E	Clinton	Western Reserve Med. Coll.
Smart, A. R	Toledo	Long Isl'd Hosp. Med. Coll.
Smith, C. N	Toledo	Bellevue Hosp. Med. Coll.
Stevens, M. B	Defiance	Bellevue Hosp. Med. Coll.
Stewart, W. D	Pemberville	Wooster Univ'y Med. Dept.
Szendery, L	Sandusky	Starling Medical College
Van Pelt, C. L	Toledo	Buffalo Univ'y Med. Dept.
White, Horace W	Delaware	Miami Medical College

The Committee recommend that the following Societies be made auxiliary to this Society:

Academy of Medicine of Delaware County.
Allen County Medical Society.
Belmont County Medical Society.
Harrison County Medical Society.
Monroe County Medical Society.

With regard to the application of the Scioto County Medical Society to "continue auxiliary to the State Society," the Committee report:

The enclosed is not in proper form. The Scioto County Medical Society forfeited its auxiliary relation, to

regain which, it must come in as a new society. The proper form embraces the filing of a copy of its Constitution and By-Laws.

The Committee find that the following auxiliary Societies are represented by delegates:

N. E. O. Med. Asso'n—L. E. Sisler, T. Clarke Miller, T. J. Reed, W. S Hough.
Cuyahoga Co. Med. Soc.—A. R. Baker.
N. W. O. Med. Ass'n—A. W. Kahle.
Ross Co. Med. Soc.—R. B. Hall.
Muskingum Valley Dist. Med. Soc.—E. C. Brush.
Central Ohio Med. Ass'n—Albert Cooper.
Defiance Co. Med. Soc.—M. B. Stevens.
Geauga Co. Med. Soc.—O. Pomeroy.
Harrison Co. Med. Soc.—D. J. Snider.
Sandusky Co. Med. Soc.—R. M. Durbin, William Caldwell, D. H. Brinkerhoff.
Washington Co. Med. Soc.—F. E. McKim, Samuel Hart.
Jefferson Co. Med. Soc.—J. C. M. Floyd.
Bay City Med. Soc.—L. Szendery.
Clark Co. Med. Soc.—D. M. Brarrere.
Knox Co. Med. Soc.—J. C. Gordon, F. C. Larimore.
Marion Co. Med. Soc.—F. W. Thomas.
Shelby Co. Med. Soc.—D. R. Silver, B. M. Sharp.
Monroe Co. Med. Soc.—J. R. Parry, J. Way, H. L. Rosenberry.

P. P. POMERENE, *Chairman.*

In closing the Session the President spoke as follows:

PRESIDENT MCEBRIGHT: The hour has arrived, gentlemen of the profession, when my duties as your presiding officer, are closed. I take leave to express my gratitude to the Society and its members generally, for the cordial manner in which they have received me and co-operated with me in my efforts to preside over your proceedings, and I wish to thank you, and especially our very efficient Secretary. I am very grateful to the people of Toledo for the manner in which they have received us. Although I have always been in love with the doctors, I believe that that love has been somewhat increased, and I feel towards the profession, perhaps, more kindly than I have ever felt in

my life. I hope to meet you all again. Again, I say, I cordially thank you.

The Society then adjourned to meet in Columbus on the 13th day of June, 1888, at 2 P. M.

THOS. MCEBRIGHT, *Pres't.*
G. A. COLLAMORE, *Secretary.*

LIST OF AUXILIARY SOCIETIES.

WITH DATE OF ADMISSION.

Academy of Medicine of Cincinnati 1875
Academy of Medicine of Delaware County. . . . 1887
Allen County Medical Society 1867–1887
Ashland County Medical Society. 1865
Ashtabula County Medical Society 1878
Athens County Medical Society 1866
Bay City Medical Society 1880
Belmont County Medical Society 1887
Brown County Academy of Medicine 1877
Butler County Medical Society. 1852
Central Ohio Medical Society 1869
Champaign County Medical Society 1853–1879
Cincinnati Medical Society 1875
Clarke County Medical Society. 1848–1852–1877
Clermont Medical Association 1854
Clinton County Medical Society 1879
Columbus Medical Club. 1885
Cuyahoga County Medical Society 1879
Defiance County Medical Society. 1881
Delamater Medical Association of Norwalk and Vicinity 1859–1870
Erie County Medical Society 1850–1877
Gallia County Medical Society 1884
Geauga County Medical Society 1882
Hardin County Medical Association 1884
Harrison County Medical Society 1887
Hemstead Academy of Medicine 1885
Highland County Medical Society 1877
Holmes County Medical Society 1869
Jefferson County Medical Society 1859
Knox County Medical Society 1863

Lake County Medical Society 1885
Lawrence County Medical Society 1877
Licking County Medical Society 1877
Lebanon Medical Society 1879
Madison County Medical Society. 1881
Mahoning County Medical Society 1879
Marion County Medical Society 1879
Meigs County Medical Association 1850
Miami County Medico Chirurgical Society. . . . 1851
Miami Valley Medical Society 1879
Monroe County Medical Society 1887
Montgomery County Medical Society. 1851
Morrow County Medical Society. 1878
Muskingum Valley District Medical Society . . . 1886
North Central Ohio Medical Society 1881
North-Eastern Ohio Medical Association 1870
North-Western Ohio Medical Association 1869
Pickaway County Medical Society. 1856–1878
Piqua Society of Clinical Medicine 1886
Portage County Medical Society 1869
Preble County Medical Society. 1849
Ross County Medical Society 1876
Sandusky County Medical Society 1880
Seneca County Medical Society 1854–1879
Shelby County Medical Society. 1852
Stark County Medical Society. 1850–1852
Stillwater Medical Society. 1873
Summit County Medical and Surgical Society. . . 1886
Toledo Medical Association 1857
Trumbull County Medical Society 1868
Tuscarawas County Medical Society 1851
Union Medical Association of Columbiana and Adjoining Counties 1879
Washington County Medical Society 1886
Wayne County Medical Association 1850
Wood County Medical Society. 1877
Zanesville Academy of Medicine 1886

OHIO STATE MEDICAL SOCIETY.

At the Seventeenth Annual Session of the Ohio State Medical Society, the following resolution was adopted:

Resolved, That the publication of any address, prize essay, or other paper, by this Society, is no evidence of its endorsement of the sentiments therein contained.

President's Address.

BY THOS. McEBRIGHT, M. D., AKRON.

The origin of medicine is obscure, and dates back to the early existence of the human race. It is coincident with the liabilities of mankind to injury, sickness and decay. As a science, it has undergone many transitions. Long before the epoch which our chronology marks "B. C.," it had its beginning.

Begat in ignorance, it was slave to superstition, and subject to the mummery of religious rites. To the early physician, a superhuman character belonged. He was endowed with more than Sacerdotal dignity. Sometimes he was deified; temples were erected and dedicated to his art, people and priests were sworn not to profane the mysteries of medicine.

The first people to methodically arrange and pursue medicine were the copper-colored sons of Egypt. They veiled it in mystery and environed it in secrecy. Fostered and enveloped by the mantle of the priesthood, its valuable tenets were more mysterious than even the mysteries of Godliness. But by the more or less intelligent application of facts, their steady accretion of ages in succession, medicine has become a science exact and demonstrable.

Gentlemen, forty-two years ago this Associatiou was organized, having for its object the advancement of the profession toward the goal of perfection. It was organized for the purpose of aiding in solving some of the problems of life, to add some material to the growing temple whose foundations were so firmly laid by the sages of the past, and do its part in the cause of humanity. In this it has not entirely failed. Professional ambition has been stimulated, a spirit of emulation has been successfully evoked, and valuable contributions to science have been elicited. The union of our members has been strengthened, thus giving us influence and power.

Our annual meetings have a socializing and unifying influence. They are to us what the telegraph and railroad are to commerce. They bring the active, working doctor from cities and villages to an interchange of thoughts and opinions. The crude materials of science are accumulated facts, the result of the observation of ages. These would forever remain in useless chaos but for the co-ordinating power of reason. On these silent phenomena, reason sits in judgment "as a refiner of fire and purifier of silver." It forces the voiceless facts to mount the tripod of the oracle and speak forth words of wisdom. Subsidiary to its purposes may be the crucible, the scalpel and the microscope, but they can not supply its place. The lamp that lights the footsteps of the investigator in medicine, as in all other departments of science, is patient, untiring, incessant thought. Stimulate attention, concentrate thought, and you will lead mind into many a new discovery, and hasten the establishment of principles which may be of more importance than any heretofore revealed, and which are yet in the matrix of the future.

To this, gentlemen of the Ohio State Medical Society, you are committed. How to accomplish it with economy of time is to you a vital question. In view of this, the contributions read at our meetings should be attentively considered and fully discussed. This would encourage effort and give to the contributors the stimulus of respect. Let the reports be freely discussed and go forth to the world with the sanction or criticism of the Association. This course, gentlemen, would yield us ten-fold compensation for the time employed and greatly enhance the interests of our annual sessions. In view of the contemplated change or amendments to our constitution, I would respectfully suggest that some time be set apart for the discussion of some of the leading topics of medical philosophy, of the laws of hygiene affecting masses of men, the various causes of mortality, in short, the chemical and vital principles of life directly bearing upon the conditions of advanced civilization. Questions like these indicated a year in advance for discussion, would excite a carefulness of investigation, a degree of attention and thought which would not fail to clear away the fog of doubt that yet shrouds many of these points.

Public debate sharpens the intellect, fixes attention, and develops the faculties of the mind. Need we doubt but that there are facts, accumulated facts, sufficient to establish great and general principles of which the medical world is yet in ignorance? Nothing would better aid to elucidate the principles yet veiled in obscurity than a free discussion, after a year's preparation and thought thereon. In discussing these we are dealing with vital factors, not with the dead ideal of the past.

Now, as to the practice of our Association meeting in different localities, I feel as though it deserved commendation. It has a tendency to excite a wider spread interest among the members of the profession. It brings the benefits of our meetings within the reach of all. By it we acquire many new members, and these acquisitions greatly aid the high and useful objects of our Association. As to what the legislative duties of this body are, I am somewhat at a loss what to urge, as to the propriety or impropriety of the passage of laws to regulate the practice of medicine, and furnish standards for candidates for the "Doctorate." Perhaps we can do but little in this respect. Ours is a popular government, and the disposition of the people is to allow the largest freedom in everything pertaining to medicine, to medical schools and to medical men. Pass a law against quackery one year, and ten chances to one, our legislature will revoke it the next. No greater paradise on earth for quacks than these United States, and Ohio leads them all. All good things have their attendant evils, and this unbridled liberty is one of the evils of a popular government. As the general education and the cultivation of the masses advance, a little hope for a higher standard may be entertained. As matters now are, the people are not ready nor disposed to denounce quackery, nor to require a very high degree of qualification in the regular profession.

Gentlemen, laws can only make mediocre physicians. A statute would require the candidates for degrees to know only so much, a degree no doubt far lower than that to which all true lovers of knowledge would attain without any legislation. There is no process nor law enactment that can manufacture one great light in the galaxy of literature, but it is thirst for knowledge, burning ambition,

philanthropy, self-sacrifice—these are the essentials that make the great physician and surgeon. These are the elements that have made all the worthies of the past, and must make the eminent for the future. You cannot drive a *drone* to the proud heights of professional eminence by any statutory law. But he who reaches the summit and is permitted to inscribe his name high upon the tablet of successful greatness, will be found to be an aspirant, stimulated by a stronger influence. To him the "laurel blossoms of renown" and the life-giving mission of his art, are dearer and more attractive than was the mystic bough of the Sibyl to the Trojan Eneas, or the golden apples guarded by the sleeping dragons to the Hesperean daughters. We have the dignity of a noble calling to sustain, a profession which has numbered for more than two thousand years among its members, some of the wisest and best men of all countries and climes; to sustain the rank and respectability of a vocation which can boast of a Harvey, a Hunter, or a Gross, is no trivial matter. These were sages and philanthropists, the most erudite and beneficent the world has ever known. And by the doctors of to-day the dignity of this godlike profession must be sustained.

Intra-Peritoneal Hematocele Considered as a Consequence of Ruptured Tube-Pregnancy, with Report of a Case.

BY CHARLES A. L. REED, M.D,

Professor of Surgical Diseases of Women in the Cincinnati College of Medicine and Surgery, and of Clinical Gynecology in the Woman's Medical College of Cincinnati; Fellow of the British Gynecological Society, etc.

Two years ago, I invited the attention of this Society to the surgical treatment of *extra*-peritoneal hematocele. I then urged that, in a vast majority of cases, the extravasation should be left alone, as absorption would take place; but that in certain other cases, such as recurrent hemorrhage and suppuration, of which I gave an illustrative instance, the bleeding-point should be controlled by laparotomy. This year, I beg to call your attention to *intra*-peritoneal hematocele, and to urge precisely the same central idea in treatment. If it were necessary to offer any excuse for presenting this subject, other than its inherent surgical importance, it would be that in England the whole question is not only a moot one in scientific circles, but has recently figured as a problem in medical jurisprudence. In this latter relation the question raised was, essentially, should the uterine appendages be removed on the affected side in cases of intra-peritoneal hematocele? And if so, why? The answer given was in the affirmative, because, it was alleged, in the cases operated upon the hematoceles resulted from ruptured tubal pregnancies, and the extravasation was perpetuated by a bleeding-point in the rent in the tube. It is my purpose to devote this paper to a partial discussion of this relatively new postulate in abdominal surgery, rather than to a systematic study of accumulations of blood within the peritoneal cavity.

In examining the early literature of this subject, one is struck with the fact that writers on tubal pregnancy never failed to speak of rupture of the sac as a fruitful cause of hemorrhage into the abdominal cavity; yet, when they began to discuss this latter condition under the head of he-

matocele, they almost invariably failed to speak of tubal pregnancy as an etiological factor. This, indeed, is true of a large number of our modern authors. If, therefore, we desire to get the views of authors, early or modern, on this important question, we have to examine their utterances under the head of tubal pregnancy rather than hematocele. This holds true of Duverney's case, recorded as having occurred as early as 1712. It is stated by Mr. Lawson Tait,[1] in the "Ingleby Lecture" for 1886, that Bernutz,[2] in 1848, was the first to recognize the causal relationship existing between tubal pregnancy and hematocele, and to indicate the proper line of treatment, viz., laparotomy and ligature. I am disposed to accept this claim for Bernutz, so far as it relates to a suggestion of treatment; but I must insist that all the *essential conditions* of intra-abdominal accumulations of blood from ruptured tubal pregnancy were recognized and described[3] by one of Mr. Tait's own countrymen, Dr. John Burns, of Glasgow, as early as 1814. It is true, Burns does not use the word "hematocele," which was coined by Nelaton a quarter of a century later, and which is such a positive misnomer that it had better never have been coined at all.

Burns, however, said that "the sac might burst and the patient die from hemorrhage." He clearly described the subsequent changes when he said that "irritation is produced, inflammatory symptoms supervene, and hectic takes place." He still further indicated his insight into these cases when he said of them that "the most frequent termination is that by inflammation ending in abscess." And I know no better way to round out a description of what is now known as hematocele than by employing Burns's observation that the suppurating contents of a burst tubal pregnancy "might be enclosed in a kind of cyst of lymph." Blundell,[4] writing in 1830, recognized the same condition, and said that he did not doubt that "many women die in this way, but, being buried without examination, the real cause of their death is never ascertained." He even went so far as to *mention* the expediency of abdominal incision

1 Lancet, October 30, 1886.
2 Bernutz and Goupiel: Diseases of Women, translated by Meadows. New Sydenham Society, 1866.
3 Principles of Midwifery, by John Burns, edited by James, vol. i., p. 168. Philadelphia, 1817.
4 Principles and Practice of Obstetrics, p. 442. Washington, 1834.

for the control of the hemorrhage, but doubtless under the pressure of the medieval conservatism of Guy's Hospital—a conservatism which still exists in that institution—he abandoned the idea, leaving it to be again suggested by Bernutz thirty years later, and finally to be realized by Mr. Lawson Tait after the lapse of a half dozen decades. Between Blundell and Tait, numerous writers touched upon both topics, but relatively few of them recognized that tubal pregnancy caused intra-peritoneal hematocele. As soon as Nelaton, and, subsequently, Bernutz and Goupiel, began to write upon hematocele, the profession appeared to drift away from the definite etiology and pathology so clearly outlined by John Burns, until latter-day authors attribute the condition to almost every other than what I believe to be the one most fruitful cause. One of them,[1] while not entirely ignoring tubal pregnancy as a cause, manages to so hide it under glittering generalizations that the obscuration amounts to a negation. Thus we are told that hematocele may come from: "1, Reflux of blood from the uterus; 2, direct outflow from the pelvic or lower abdominal blood-vessels; 3, metastasis, or transudation in certain blood diseases." Of these three general conditions the second is, to my mind, the only one not open to the most rational doubt. The valve-like arrangement of the tubal endothelium is sufficient to subject the first proposition to a fatal uncertainty. I entirely agree with Emmet,[2] that the "contents of a distended uterus never pass into the peritoneal cavity unless by rupture of that organ itself or of the uterine portion of the tube, which may have become dilated." The metastatic doctrine, considered in this relation, lacks that confirmation which would justify us in saying that the extravasation is anything else than "a direct outflow from the pelvic blood-vessels." It strikes me that this classification must finally resolve itself under the one head. But why should the lower abdominal or pelvic blood-vessels rupture? I am aware that, as a consequence, generally, of repeated and frequent pregnancies, the intra-pelvic veins sometimes become varicosed; and that, under the pressure of pre-menstrual congestion, pelvic inflammation, or mental shock, they sometimes rupture,

1 Harris, Internat. Encyclop. of Surgery, vol. vi., p. 823.
2 Emmet: Prin. and Prac. Gynecology, p. 242.

but in that instance the escape of the blood is beneath the fold of the broad ligament and, consequently, extra-peritoneal. And here I want a word about an extra- becoming converted into an *intra*-peritoneal hematocele. It strikes me in view of the ease with which the peritoneum can be peeled off the pelvic and abdominal wall, that it would yield its normal adhesion rather than rupture in its continuity to accommodate the pressure of the increasing clot. As a consequence, I believe that the cases are few and far between in which the peritoneum ruptures from the mere force of the circulation, and permits a clot which had formed outside of it to escape into the abdominal cavity. I have been forced to this view by several cases[1] of exra-peritoneal hematocele upon which I have operated, and in some of which the peritoneum was pushed as high up as the umbilicus. In these instances the resistant power of that membrane was put to the test, and not found wanting. In one case, in particular, the rupture and extravasation were results of mental shock occurring at the menstrual period; but in that case, in which the accumulation was the largest I have ever seen or read of, the peritoneum did not rupture. It is not designed by this evidence, which is far too limited to serve for general conclusions, to deny, much less to disprove, the doctrine that hemorrhage from veins situated outside the peritoneum may cause, primarily, extra-peritoneal hematocele and secondarily, by rupture, intra-peritoneal hematocele; but it is designed to prove that these varieties are not so easily convertible as some authors, as, for instance, Emmet, would have us believe, and that when accumulations of blood occur within the peritoneal cavity, the strong probability is that they result from hemorrhage directly into that cavity. If, now, we grant the existence of tubal pregnancy and consider the bursting of the sac, we can understand how, in at least the vast majority of such cases, the resulting hemorrhage would be intra-peritoneal. And, if we go a step further and consider the demonstrated frequency of inflammatory disease of the Fallopian tubes, the resulting destruction of the endothelium, the consequent facility with which the spermatozoa may pass into the ampulla, the fecundation of the ovum and fixation of the products of conception at that point, we can understand

1 Transactions of the Ohio State Medical Society, 1885.

why tubal pregnancy is of much more frequent occurrence than was formerly supposed. We can readily understand, too, how the fanciful classifications of the origin of the blood, which we have quoted, come to be reduced to one head, viz., "rupture of the lower abdominal or pelvic blood-vessels," and how, in the particular of intra-pelvic hematocele, such rupture probably depends, in the majority of instances, upon the existence of tubal pregnancy. I have called attention to Harris's classification because he is one of the ablest writers in America, and because it is teachings such as his that have led the profession away from what later experiences are proving to be one of the most fruitful and, until very recently, one of the most fatal causes of pelvic hematocele, and that have, as a consequence, diverted attention from what, in the light of modern surgery, is the only rational treatment of the condition.

It is fortunate, however, that the other side of this important pathological question has not been entirely neglected. From the time Blundell, in 1830, and Bernutz, in 1848, guessed at the nature of these cases and suggested the expediency of abdominal section for the control of the progressive hemorrhage, there was no one to put the suggestion into practice until Mr. Lawson Tait,[1] in 1881, at the urgent solicitation of Mr. Hallwright, of Birmingham, did the operation. It was the beginning of a new era in the intelligent understanding and management of these hitherto intractable cases. Prior to that time the mortality was almost one hundred per cent.; since that time I have heard of no one losing a case subjected to Mr. Tait's line of treatment, except in one instance, and that was a case in Mr. Tait's own hands. The pathology upon which the treatment was based, and which has been confirmed by the revelations of the treatment itself, has, however, been more generally accepted than has the practice. Schroeder,[2] J. Veit,[3] and Kirrisch[4] are among the leading Germans who agreed with Fritsch,[5] that "the most frequent source of the hemorrhage is the ruptured ovisac of a tubal or other extra-uterine pregnancy." Among gynecologists, Tait,

1 Lancet, October 26, 1886; also, Diseases of Ovaries, p. 348.
2 Handbuch der Krankh. der weibl. Geschlechtsorgane, 7 Aufl. Leipsic, 1886.
3 Zeitschrift fur Geburt und Gynak,, 1884.
4 Quoted by Lusk: Midwifery, p. 289.
5 Fritsch: Dis. of Women, p. 289. New York, 1883.

Imlach, Berry Hart, Thomas, and Emmet are among the most conspicuous who concur in the doctrine, while among the obstetricians, Lusk, Parvin, Barnes, Galiban, and Playfair may be mentioned; indeed, it appears that among those who are the closest students of this question there is practical unanimity that tubal pregnancy is the most common cause of intra-peritoneal hematocele, but, as I have intimated, there is less unanimity on the subject of treatment. Why there should be variance on this question, when there is practical agreement on the more primary and fundamental one, is not apparent, unless we shall find that different constructions are placed upon those pathological changes which take place subsequent to extravasation. To my mind those changes were described with great fidelity to truth, if not to details, by John Burns, already quoted. There are, however, several points of difference between later writers. Thus Fritsch[1] says: "The blood in the peritoneal cavity does not remain fluid, but coagulates very rapidly." Tait[2] says: "When blood flows in quantity into the peritoneal cavity, probably by reason of its dilution by the lymph always present there and easily excited into excessive flow by any abnormal condition, it does not show much tendency to coagulate save in a very fitful and fragmentary way." This is a starting-point of a further divergence culminating in the matter of treatment. Fritsch says: "The operative treatment of hematocele has given very bad results." Tait says of his first twenty cases operated upon, "The recovery has been complete and permanent." If we study the pathological changes subsequent to rupture we have to take into consideration several elements, viz.: 1, The blood; 2, the fetal structures; 3, the placental tissue; 4, the lacerated tube; 5, the peritoneum. My own experience accords with that of Imlach and Tait, that the blood remains largely liquid; I am, however, so thoroughly convinced of the absorbent power of the peritoneum that I believe it would take up the extravasated blood were it not for one or both of two conditions, viz., continuous hemorrhage and suppuration. But here are precisely the occurrences which interfere with the spontaneous cure of the vast majority of these cases.

1 Op. cit., p. 290.
2 Lancet, October 30, 1886.

Interpreted in the light of well-known pathological laws, the changes which take place are as follows, viz.: Suppuration begins with the fetus, which, by being deprived of the environment necessary for its growth, dies; the blood is the next to yield, and the placenta last. If we consider the necessary death of the fetus, I do not see how we can expect to get along for any considerable time in these cases without having pus; although the failure to find remnants of fetal tissue in certain instances shows that suppuration may either be deferred until after absorption of the embryo has become more or less complete, or that it has the power to completely disintegrate the, as yet, almost protoplasmic product of conception. The behavior of the peritoneum is different at different stages; thus, immediately after rupture of the tube, the blood and fetus, like any other foreign bodies or irritants, provoke it to increased vascularity, and there is a temporary transudation of serum; if, however, suppuration does not ensue, the vascularity of the membrane accommodates itself to the new conditions, the serous flow ceases, and the absorbent function begins to be exercised. But let tissue-disintegration begin in the fetal structures, and, as a consequence, suppuration ensue in the exuded blood, the behavior of the peritoneum is changed at once—vascularity leaps at a bound to inflammatory stasis; a stream of serum is thrown out; cell-proliferation takes place on the surface; plastic lymph is exuded; proximal surfaces become agglutinated, and the suppurative process becomes temporarily limited by a sort of provisional encystment. But we have omitted to speak of the Fallopian tube; what has it been doing? With a rent in its continuity it has been adding to the volume of blood already extravasated, and this addition goes on, because of the lax condition of the tubal walls themselves, because of the non-resistant power of the exuded clot and of the neighboring intestines, and, finally, because of the enlarged condition of the vessel itself. With the volume of blood gradually increasing, with the product of rapid cell proliferation, and with the increasing volume of exuded serum all added to the temporarily limited mass of suppuration, the pressure is increased, the peritoneal adhesions yield, the pus is brought in contact with a denuded and now absorbent surface, and septicemia results; or, suppuration aside and

the hemorrhage alone progressive, what other result than ultimate exsanguination can be expected? What wonder that, under the old let-alone regime, the mortality in these cases was almost universal?

With this pathology as the guide, the duty of the surgeon with regard to treatment is, to my mind, obvious. It is merely an application of that general law of surgery which, as formulated by Tait and applied to these cases, is as follows:[1] "For surgical hemorrhage, cut down and tie the bleeding point; if a big branch of the femoral artery were bleeding, my colleagues who deal with such cases would cut down and tie it. Why should Poupart's ligament be a line of demarcation within which this writ will not run?" Bernutz and Goupiel[2] say: "The indication in such cases is plain—we must stop the hemorrhage." No person, I fancy, who properly realizes the situation in these cases will deny the propriety of the proposition; but it occurs to me that there are other indications than hemorrhage for surgical interference—the damaged tube, the fetal structures, and the placental tissue demand attention. Of the latter two it may be said that, even though they become incapsulated and partially absorbed and the residue remain innocuous, they can not be considered in a surgical sense other than as foreign bodies, and, as such, constant menaces to the health and life of the patient. The tube of necessity becomes destroyed as an oviduct, and, if left intact, it will only be to figure at a later period as a hemato-salpinx or a pyo-salpinx, and consequently to ultimately demand extirpation. Not losing sight of the fact that some of these cases do well—*i. e.*, the patients live when left alone—the rule remains, that laparotomy is demanded by four considerations, viz: (1) To control the hemorrhage; (2) to remove the products of conception; (3) to extirpate the tube and, of course, the ovary; and (4) to remove the elements of sepsis. It would be well in this connection to mention certain conditions under which I would question the expediency of removing the appendages. I allude to those cases in which the tube and ovary have become adherent to the adjacent parts (and they are generally in this condition), and in which suppuration has

1 Lancet, October 30, 1886.
2 Diseases of Women, p. 202. New Syden. Soc.

already taken place (which is relatively less frequent). To tear the tube and ovary away under such circumstances would be to expose the patient to the dangers of septicemia by bringing purulent material directly in contact with a raw absorbent surface. In these cases I would control the hemorrhage by passing a deep ligature through both folds of the broad ligament, precisely as I recommended in my former paper should be done in cases of intractable extra-peritoneal hematocele.

For the purpose of illustrating the foregoing principles, I beg leave to call your attention to the following case:

Mrs. H——, aged thirty-nine, became pregnant in March last. She missed twice. Not desiring children, she took an abortifacient of some sort. A few days later she called in a physician to control a metrostaxis. She deceived him as to the exact nature of her case, which now took a different turn. The metrostaxis ceased, but she was seized with violent pains low down in and to the right of the pelvis, and she fainted twice during the day. A few days later she called in Dr. H. E. Twitchell, of Hamilton, to whom she gave a history of recent rigors followed by high temperature. He found a tumor occupying Douglas's cul-de-sac, which he took for the fundus of a retro-displaced uterus. Coupling these physical conditions with the history of abortion, he concluded that the conception was dead, but that, owing to the position of the uterus, it had not been discharged, and that the clearly septic symptoms were of intra-uterine origin. He sent for me to relieve the uterus of its contents. On my arrival, May 6th, I found, in addition to the foregoing physical conditions, diffuse tumefaction in the pelvis, the cervix well forward under the pubes, a tender and tympanitic belly, and a temperature of 104° F. The condition was so like what I had seen in retroflexion of the gravid uterus that I was disposed to accept Dr. Twitchell's diagnosis. The inflammatory symptoms were so great, however, that I concluded to give the patient some opium and quinine, pack the vagina with a tampon of glycerine and tannin, and wait until [illegible] next day.

May 7th.—T[illegible] ad so far subsided that it was deemed [illegible] vacuate the uterus. The sound int[illegible] ot, however, turn back-

ward into the supposed retroflexed fundus, but followed the ordinary course three and one-fourth inches. A curette forceps was now introduced, and numerous shreds of decidua were removed. Bimanual examination now enabled me to make out the womb and the retro-uterine mass as two separate bodies. Around this central fact the whole history of the case now took shape, and a diagnosis of tubal pregnancy, with resulting hematocele and abscess, was pronounced. Laparotomy was done the same afternoon, Drs. Twitchell, Skinner and Fitton present and assisting.

A two-inch incision was made. The peritoneum was found stained with blood, studded all over with patches of exudation-lymph, while all proximal surfaces were agglutinated. On introducing my finger, and passing it toward the cul de sac, I found myself breaking up these adhesions, which were but slightly resistant, until presently it appeared to drop into a sort of cavity. Fetid pus, semi-liquid blood, shreds of fetal tissue, and placental *debris* now came welling up through the incision. Sponges were introduced to limit the diffusion of this septic material, and an attempt was made to pump out the remainder with an aspirator-tube, but failed. I now introduced sponge after sponge, throwing each one away as I removed it, until they came back coated with laminated placental tissue rather than blood or pus. Recourse was now had to flushing, and pitcherful after pitcherful of water was thrown into the abdomen. Not satisfied with this, I drew out the intestines, carefully mopped them off, returned them, and again flushed. A sponge now removed showed a fresh blood stain, and I felt that I yet had a bleeding point to deal with. The tube was, however, firmly adherent, and I felt that to tear it loose would expose its site to infection from some possibly remaining pus. I consequently satisfied myself with ligating through both folds of the broad ligament, leaving the tube within the silk. I again flushed, introduced a drainage-tube, and closed the abdominal incision. The patient was put to bed; her temperature before the operation was 104.4° F.; she now had a rigor, which I attributed to shock; after this the temperature again went to 104° F., but speedily came down to 99°.

The after treatment consisted in Bantock's method of

irrigating the cavity every two hours with a solution of sulphurous acid, beginning with one part in twenty of water, increasing the strength finally to one in five. In the early stages of the case I added twenty-five per cent. of glycerine, my object being to favor the exosmotic action of the tissues and thus render absorption the more improbable. Considerable pus was washed out each time for several days. No opium was given. On the fifth or sixth day, however, the temperature ran up to 103°, occasioned, as might have been expected, by the development of an abscess in the primary incision; this, however, was opened by Dr. Twitchell, who obliterated it with a single application of powdered salicylic acid. At the end of the third week drainage was discontinued, the sinus in the abdominal wall being kept open by a pledget of cotton. A few days later the patient had a rigor, and her temperature ran up nearly to 104°. Dr. Twitchell promptly reopened the channel with a bullet-probe, and removed a very perceptible quantity of pus from the original sac. The sinus was now further dilated by slippery-elm tents passed the whole length, when a drainage-tube was re-introduced, and the case treated as before. From this point she made an uninterrupted recovery.

This is but a single contribution to the record of laparotomy for the relief of conditions which, prior to 1881, were almost uniformly fatal. From that time up to the date when Mr. Tait sent the fourth edition of his book to press (1883), he had operated upon twenty cases, with twenty recoveries, while in his "Ingleby Lecture," already quoted, he says: " . . . between January 1883, and July, 1886, I operated upon twenty-five cases, saving twenty-four of them, a very striking contrast to the old plan of letting them alone to die." Dr. Francis Imlach, whose brilliant record entitles him to recognition as one of the pioneers in this extension of abdominal surgery, told me when I was with him recently in Liverpool, that he had done sixteen cases with sixteen recoveries. I have not had time to examine the serial literature for the further record of this operation, although I believe that in England, Bantock of London, Greig Smith of Bristol, and Sinclair of Manchester, have been identified with it. But take the brief record that I happen to have at hand, and that is

presented herewith, and we have sixty-two cases operated upon, with only one death. Where in the annals of extra-uterine fetation, is a similar record to be found in the let-alone policy?

Let me conclude this paper, which is already too long, with the following summary: (1) Intra-peritoneal hematocele is an intra-peritoneal accumulation of blood. (2) Ruptured tubal pregnancy, the most common form of extra-uterine fetation, gives rise to an accumulation of blood within the peritoneum. (3) In consequence of the fluid condition of the extravasated blood, and of the yielding character of the adjacent tissues, the hemorrhage has a tendency to continue. (4) In consequence of the death of the fetus, there is developed a marked tendency to suppuration. (5) In consequence of becoming a foreign body, the product of conception, even though it become encysted, is a constant source of danger. (6) The damaged tube, if left *in situ*, can serve no other than a pathological purpose. (7) Laparotomy is therefore called for (*a*) to control progressive hemorrhage, (*b*) to remove dangerous *debris*, (*c*) to extirpate worthless appendages, and (*d*) to overcome septic conditions. (8) Extirpation of the appendages should not be practiced when adhesions are firm, and free pus exists in the sac. I was taught this lesson some years ago, by losing a patient from pyemia in whom the pus, discharged from an infinitesimal cyst which was accidentally ruptured, had been absorbed by the raw surface from which an adherent ovary and tube had been torn. (9) In cases in which the appendages are left, the bleeding, if slight, may be controlled by the styptic influence of the sulphurous acid irrigations, or, if considerable, by deep ligature of the broad ligament. This is the expedient which I suggested to this Society in a former paper. I had occasion to apply it first for the control of intractable hemorrhage in a case in which I had enucleated a very large intra-ligamentous cyst of the ovary, and I did it last in the case reported in this paper. The observance of these rules will, I believe, result in the highest success of a line of treatment the adoption of which is demanded by the revelations of pathology and the dictates of modern surgery, and the vindication of which is to be found in the brilliant record which it has already scored.

HAMILTON, OHIO.

The Eyesight and Hearing of Railroad Men.

BY A. R. BAKER, M. D., CLEVELAND.

Much has been written on the danger to the traveling public as the result of defective seeing and hearing of railroad men. There has been a sentiment created so strong that even in states where there are no laws regulating this matter, railroad corporations are compelled to go through the form, at least, of making tests of hearing and seeing in deference to public opinion.

It is not in the province of this paper to discuss the necessity of such examinations which all will recognize, but to point out the injustice which is often done to railroad employes, and the general inefficiency of examinations as now conducted, and, if possible, suggest a remedy.

That original apostle of reform in railroad men's vision, Dr. B. Joy Jeffries, of Boston, in a paper read before the American Ophthalmological Society, gives some striking instances of the injustice and inefficiency possible under a law which, like the present one in Massachusetts, permits the examinations to be made by poorly qualified persons and under empirical rules. It is true the law says that examinations must be made by a competent person, but so long as no one takes it upon himself to bring the matter into the courts for a decision as to what constitutes a competent person, the most ignorant or careless superintendent is at liberty to decide the question for himself.

Dr. Jeffries refers to numerous cases of total disregard of the laws by companies; employes being found who have never been examined, and others coming of their own motion to satisfy themselves that their eyes are normal. In the case of one brakeman, "the only test he had was the train dispatcher asking him how many knobs there were on an adjacent telegraph pole, and telling him his vision was as good as any one on the road."

The Ohio law regulating the examination of railroad employes for color blindness and defective sight, reads as follows:

(*House bill* 541—*passed February* 19, 1885.) *Be it enacted by the General Assembly of the State of Ohio:* That no railroad Company shall hereafter contract to employ any person in a position which requires him to distinguish form or color signals, unless such person within two years next preceding has been examined for color-blindness by Holmgren or other approved test; and other defective sight by some competent oculist or other person employed and paid by the railroad company, and has received a certificate that he is not disqualified for such position by color-blindness or other defective sight. Every railroad company shall require such employe to be re-examined at least every two years, at the expense of the railroad company, provided that nothing in this section shall prevent any railroad company from continuing in its employment an employe having defective sight, in all cases where such defective sight can be fully remedied by the use of glasses, or by other means satisfactory to the person making such examinations.

This law is very good so far as it goes, and is much better than none at all. But to my knowledge it has been the means of having several men with defective color vision transferred to other divisions of the road, in states where they have no law regulating this matter. The law provides for the examination to be made by "some competent oculist or other person." This "other person" has usually been the division superintendent, or other railroad official, who has been satisfied to display a few signal flags and colored lights, and give certificates that the employe "is not disqualified for such position by color-blindness or other defective sight." And it makes no provision for the examination of employes for defective hearing, which is often of as much importance as that for defective seeing.

And the injustice and inefficiency of these so-called "tests" may be judged by the following cases, which have come under my observation and that of my colleagues. They will serve to show conclusively the necessity of reform in the method of conducting these examinations.

Case 1.—A conductor on freight train was found to be defective in hearing by the superintendent of the division, who conducted the examination. He was then ordered to report to the surgeon of the road. His hearing was found very defective, only hearing a watch when touching the ear. Immediately after his discharge I was consulted, and found him suffering from a simple acute inflammation and closure of the Eustachian tube, the result of an ordinary cold in the head. I inflated his ears with Politzer's air douche and restored his hearing perfectly at once. This was some two years ago and he has had no trouble with his hearing since.

It was with the greatest difficulty this man secured his position again, and that only after several months of enforced idleness, and by a personal appeal to the superintendent on our part.

Case 2.—Brakeman rejected by examiner on account of defective hearing. I found both ears filled with plugs of wax, which a vigorous use of the syringe soon removed and restored his hearing at once.

Case 3.—Engineer for twenty years on same road. Lost use of one eye from accident twelve years before. Although having the use of only one eye he was considered one of the safest and best engineers on the road. There came a change of management, and one of the new rules was that all one-eyed engineers must go—our old friend with the number. He came to me for relief. I made an iridectomy, restored his sight and secured him his old position. It is true this was rather an exceptional case, but the examiner should have known that the sight could be restored, even though he was not competent to perform the operation himself.

Case 4.—Conductor rejected by examiner on account of defective vision. I found a moderate degree of myopia, fitted him with a pair of spectacles, and he is now at his old post.

It may be a question whether it is ever advisable to employ railroad men in the capacity of conductors, engineers, brakemen, etc., who are obliged to depend upon the aid of spectacles, but to reject every one would be equivalent to discharging many of the safest and most trusted employes.

Case 5.—Dr. Jeffries records the following case of a gateman who applied to him for a certificate for full pension for blindness contracted in the army. He groped his way into his office. He had white atrophy of optic nerve in each eye. He says at times he is completely blind in the sun, so he cannot see people on his crossing, which is an important one He holds a certificate from his road examiner, "that he is not disqualified by defective sight."

Gatemen are probably not included in the provisions of law, but prudence would seem to dictate that such cases as this be looked after by the examining officer.

Case 6.—A brakeman or fireman whose turn came soon

after an engineer who was badly color-blind made all the characteristic mistakes of a color-blind with the three Holmgren tests. He was quite convinced himself that he was color-blind, and resigned to rejection. The superintendent and the other employes were equally convinced from their own observations of the man's dangerous color-blindness. An experience with some 30,000 examinations had, however, taught Dr. Jeffries that, while the man made the most thorough and characteristic mistakes of defective color sense, he did not make them in the way the color-blind do. He says, I first thought he was deceiving me and imitating the color-blind engineer preceding him. It proved that he had carefully watched and imitated him, not with the idea of deceiving, but because he supposed this engineer was right and all the normal eyed selections he had seen were defective. He would have been rejected on all other roads where no expert was employed; a legal injustice.

These cases taken almost at random from my note-book serve to show the injustice often done employes of the road when examinations are made in the empirical fashion now in vogue. But the injustice done the employes is small when compared with that done the public by permitting men with defective hearing and seeing to continue in responsible positions, endangering the lives and property of every one. I have now under treatment a conductor who can not hear ordinary conversation. He has been deaf for years, and will never be any better. He has become somewhat of an expert at lip reading, and manages to get along in this way. I have had under observation for several years a bridge-tender who is entirely deaf in one ear and can't hear very well with the other. He is blind in the left eye with cataract, and has incipient cataract in the right. I have advised him frequently to give up his position before he meets with an accident, but he says he can not do so, as his bread and butter depend upon his keeping his position, and there is nothing else he could do. I know a yard-master who has had zonular cataract of both eyes for many years, and he is obliged to use atropia and keep the pupils widely dilated constantly in order to see at all. I have proposed to make an iridectomy which he refuses to have done, and probably will do so as long as he can see to feed himself.

Numerous cases similar to the above might be quoted showing the necessity of having the examination made by an expert, but time forbids. If the examinations were made scientifically there would not be the general "scare" which spreads among the employes of a road when they hear of a coming "test." If the men knew that the examinations were made thoroughly and conscientiously by an intelligent physician who had no prejudice for or against any of them, and no personal interest in their promotion or discharge; and if they were assured that the examination was made solely to secure the safety of the lives and property of the traveling public, there would be none of the distrust now felt when the examination is made by the superintendent or some other incompetent and perhaps prejudiced person.

The railroad company should appoint as examiner a thoroughly educated physician, one competent to make an intelligent ophthalmoscopic and otoscopic examination. He should be able to diagnose errors in refraction, and if necessary, fit spectacles scientifically. A book should be provided with suitable blanks, and a record kept of each examination. This examination would require as much skill and time as an ordinary life insurance examination, and from three to five dollars would be very moderate compensation for each examination.

It is scarcely necessary to call attention of physicians who have had experience in making tests for color-blindness, errors of refraction and defective hearing, to the fact that it is impossible for anyone, much less a railroad superintendent with no special training whatever, to examine, as is frequently done, twenty, fifty, and even a hundred, in one day, so as to be of any practical importance whatever. Examinations so made may be of positive injury, as they create a false sense of security on the part of the public, and even the employes may not take all the precautions they would if they thought there was a possibility of some of them not being able to see or hear the signals given.

The acuteness of hearing varies widely within normal limits. A watch may be heard very well in one form of deafness, and the voice scarcely at all. Or spoken words may be heard well, while a watch or a high pitch sound, like a locomotive whistle, not at all. Some patients hear better in a noise; others can hear very well in a quiet room,

but not when surrounded by noise and excitement. These various forms of deafness have a great bearing upon a man's fitness to serve in the capacity of a railroad employe. The skilled aurist with his tuning-fork and other instruments of precision, will soon recognize the one who hears better in a noise; who has been surrounded by the thunder and rattle of a moving train until his aural nerves have been blunted to the fine ticking of a watch in a quiet room, but who can understand conversation on a locomotive running fifty miles an hour, that would be inaudible to you and me.

If it is true that normal hearing varies greatly, it is even more true of seeing.

Cases of color-blindness will sometime deceive the very elect, and tests devised to make a promiscuous examination of a large number at one time, are a delusion and a snare. An examination of this kind must be made privately to be of any value.

But I must not impose upon your patience longer, and if this incomplete paper should be the means of provoking a discussion which would result in a reformation in the method of examining the eyes and ears of railroad men, I believe it would not only meet with the approval of railroad employes, but reduce to a minimum the number of accidents occurring as the result of defective hearing and seeing, and be the means of saving many valuable lives every year.

DISCUSSION.

Dr. J. W. Hamilton, of Columbus: There are one or two points with reference to this subject that for a moment I would like to call attention to. Railroad superintendents and railroad presidents represent large business interests. It seems to me the way to get at this matter is from that stand-point: that they cannot afford to have in their employ men with defective hearing or with defective vision. The financial interests of their companies, the interests which they represent, are put in peril, to an extent that forbids them taking any such risks. It really seems to me the

most practical way of getting at it is from that stand-point. Men running railroads are not looking after the interests of humanity always; they are looking after the almighty dollar, they are looking after the next dividend, what it shall be, &c.

There is another point I want to call attention to, and that is, it seems to me that these railroad authorities ought to be urged to make a certificate covering the perfect condition of the vision and the hearing as a condition precedent to taking any man into their employ. It is a very serious matter for a man to spend three or four years learning the railroad business, who has learned to live by it, whose wife and children have learned to live by it, to discover at that late period that he is not fit for the work—that he is disqualified, and must be discharged. I have known men to become almost insane from the fact that, having selected the railroad business for their lifetime occupation, and having pursued it for a number of years, they all at once wake up to the fact that they are myopic or hypermetropic, or perhaps have some other disqualification of the eyes and ears. It seems to me there is a way of getting at it. If there is any point by which you can touch these officers, it is the financial point. It is the business aspect of the case that will touch them. It seems to me if I were a young man, and especially if I were engaged in railroad work, when a new man came, I should put that right to him on the spot: "Have you got good hearing and good sight? If you have not, you must have it before we can go any further in our negotiations."

I want to say one word more: I suppose it is impossible that the profession generally appreciate what a large proportion of the people that we see are defective in sight. We are beginning to learn it, and the people at large are beginning to learn it, and the profession is beginning to teach it. Our school system that runs through a number

of years, and keeps our children bending down with a severe strain of the eyes, is a hard test. Perhaps the pupil comes home with a flushed face, and an inability to study. Very likely you will discover upon examination hypermetropia, astigmatism, or something of that kind. In other words, our school system is developing the fact that a very considerable number of the girls cannot, without spectacles, use their eyes properly. I venture to say that on the streets of Toledo there are three persons wearing glasses for every two that wore them three or four years ago. And among the high school girls and boys, the proportion is greater than the general proportion. Those young persons that use their eyes, and use them persistently, and especially in school, are developing in many cases, not the absolutely perfect and beautiful thing that God made it: it is distorted; it is too short, it is too long, it is not symmetrical, its perceptive function is changed.

This is important, and is an exceedingly interesting and important matter; and I hope that those of you who are connected with railroad work will not forget what this gentleman has presented to you, and that this thing will be made practical, and especially the men's connection with it, and that which prevents men from seeking employment for which they are disqualified.

DR. J. H. CURRY, of Toledo: This question I consider a very important one to the public and to the railroads. The lives of the public, and their safety, depend on this question: whether the persons conducting those trains, and having to be governed by those signals, have sufficient eyesight to understand the nature of the signal which is displayed to them.

I have seen considerable of this in a practical way, both before and since the law was passed. Before this law was passed a number of times engineers had come under my observation who were unable to see a person, for instance,

even a few yards away upon the track. Those men were absolutely unfit to drive an engine. Some of those men were passenger engineers. They, however, were suffering simply from a refractive trouble, and by means of glasses their vision became normal; they could see just as well as any one. When I made the suggestion to them that they have these glasses—when I said to them, "You are not a safe man upon your engine," they admitted the fact, and said they depended upon their fireman. They refused to take the glasses, however, because it would be, they said, a badge or a sign of defective vision, and just as soon as glasses were put on, they would be called to account by the railroad officials, because of trouble with the eyes.

This law, however, was passed in Ohio, and that did away with that part of it, except in some cases, as I understand, where the division superintendent takes a particular notion of his own that he doesn't propose to have a man in his employ who has to wear glasses. I have heard of one or two such instances as this.

Now with regard to the connection of railroads with this matter: the gentleman has pointed out a thing which is apparent to every thinking man, that it is actually to the interest of railroad officials and corporations, financially, to have men upon their trains who are as competent as possible, to guard against every form of danger—from a financial standpoint, because of wrecks and destruction of property, &c. But the difficulty has been to make the railroad officials see it in that way. And the important fact that the law requires the railroads to pay for these examinations seems to have turned them into incompetent hands. I say incompetent hands, for this reason: so far as my observations have extended—take our Lake Shore road here, for instance—they have examined sufficiently to satisfy the public and protect the company, but their examinations have not been just to the employes, for the

reason that in testing the vision they make that vision 15–20. A man whose vision falls below that, they reject. But they do not stop to consider whether there is any refractive trouble or not. They might say to that person, "If you will consult an oculist, and he can bring your vision up, why, it will be all right." I have known several cases of that kind; but so far as the official action is concerned in this matter, they simply reject that man, perhaps with that advice.

But the question itself needs no discussion to show the importance of it, both to the public and the railroads. There has been some skepticism, for instance, on the question of color blindness. When this law went in force no less intelligent a gentleman than our superintendent, Mr. Curtis, asked me concerning it. I said to him, it is right, it is just, and it ought to have been done long ago. He laughed at me. He said he thought he could pick out those afflicted with color blindness. He had a theory that if they did not see red as red, it made some sort of an impression upon the retina, and consequently they would know it. But when the colors came to be laid down, and the man was brought and tried, he would mix red and green,—the most decided colors. And if you showed him bright red, and handed him the other colors, he would take the deepest green and mix it right with the red. You all know that the railroads have green and red signals. It is just utterly impossible for a man to determine the signals who is so color blind as not to be able to distinguish between the green and red signals, or the green and red lights.

There is no question but that the suggestion of the paper is correct. It ought to be brought under the observation of men who are competent to make these examinations. So far as the Lake Shore examinations are concerned, I think that is the practice of the company;

but they have proceeded in this way: simply by rejecting all those whose vision is below 15-20, without stopping to inquire why it is so.

The Management of Eczema Infantile.

BY B. MERRILL RICKETTS, M. D., CINCINNATI.

Late House Surgeon N. Y. Skin and Cancer Hospital.

There is no disease that occurs during childhood the management of which is of so much interest to the dermatologist, and, I might safely say, to the general practitioner, as eczema in its many varieties, but especially as found in infancy. Neither is there one more common, and indeed, few more obstinate to treat, if it has been allowed to go uncared for for some time.

While the general acceptation of this term—infantile eczema—comprises all those cases occurring in children under six years of age, I do not know but what it would be well to confine our remarks to those cases occurring sooner than that time—say during the first two or three years, although the treatment is very similar in both classes.

Children less than two years of age are almost entirely dependent upon the mother's care, while those over that age are able to walk about, and are expected to be governed more or less by their own dictates, the mother being responsible in the one case and the child in the other, especially as it becomes older.

Improper food is perhaps the most common cause of this disease, and the mother who will allow her nursing child to eat the food that is placed upon the average table, or who will allow it to to take into its stomach anything more than water, milk, and perhaps a little of a soft boiled egg, is just as responsible for the bad results as though she were to feed it poison, for indeed the effects are the same in the majority of cases. The action of any irritating substance will produce it, thus it may be due to a chemical or a mechanical cause.

After causing the mother to think that her child should be allowed to eat any food, cooked or uncooked, she will then give a clear history of having given it from the time of its birth, a few sips of coffee or tea, perhaps catnip, because she herself was delighted with its peculiar flavor;

or that she would allow a piece of pickle to be eaten occasionally to determine whether the child's stomach would allow it to pass undigested, by this means deciding upon the time when the various vegetables, such as cabbage, lettuce, onions and beets, should be eaten; or still worse, censure her husband for not agreeing with her that sauer krout would cause the infant to rest well without the use of some one or two of the many patent nostrums so often found in the drug stores and groceries of our country. Such a class of goods should be confiscated. They are all too generally known to us, and with our constant and united efforts would in rapid succession share the fate of the notorious toy pistol or the destructive dynamite bomb.

It is a common occurrence in our larger cities, and especially among the Germans and poorer families of all nationalities, to find infants fed daily upon beer. One of the most striking illustrations of what this habit leads to was presented to me while passing along one of our prominent streets during the past summer. A mother, with her nursing babe in her arm, was pouring beer from the unemptied kegs sitting upon the curb stone into a tin bucket; upon being asked what disposition she expected to make of it, she replied,—drink it.

Passing on, I was left to draw my own conclusions, which were that the child would either directly or indirectly receive its proportion of this stale beer.

Here was a mother whose blood was already impoverished for the want of care and the proper food. I did not have the time, nor did I care at that time to make an examination, or I should perhaps have found a patch of eczema. I do not mean that all poor children have this disease, but that among them we find the conditions favorable to produce it.

It may appear suddenly without premonitory symptoms or any known cause.

(1) "Rayer says that those children who labor under eczema of the face and hairy scalp while they are teething rarely suffer from convulsions or obstinate diarrhea."

How often we hear it said that teething is the direct cause of eczema. I do not think this is so, as the per cent.

1 Wilson on Skin, 1842, p. 166.

of cases is about the same among the older. They are merely associates, the eczema being the result of certain conditions produced by teething—such as nervous or gastric irritability, or some derangement of the alimentary tract, as I have stated, a condition which is perhaps the most common cause.

Children with the most robust constitutions and in the best of families are subject to it.

Wilson mentions (1873, page 189,) a case of a child six weeks old whose mother was chilled by a journey; that night she became feverish; twenty-four hours later it experienced the same symptoms with the addition of an eruption of eczema.

He also mentions a case of extensive eczema rubrum in a child whose mother suffered the loss of her husband during her confinement.

Sudden exposure to either cold or heat will produce it; constipation is another very common cause, and the unfrequent changing of napkins sometimes excites it.

At times it is preceded with fever (especially with children) lasting two or three days, accompanied by the usual febrile disturbances, such as nausea, loss of appetite, and frequent stools.

It attacks both sexes alike: of the six hundred and seventy-six cases reported by Bulkley in private practice, three hundred and sixty-three were males and the remaining three hundred and thirteen were females. These comprised cases under five years of age.

There is no tendency to spontaneous recovery, but on the other hand it may go on and become chronic, a condition known to some of the older writers as *psoriasis infantilis*.

Sometimes there are fissures and cracks upon the knees and elbows if the disease is extensive, which give rise to a great deal of suffering. They sometimes bleed and are attended with more or less pain. It is a very unpleasant complication, and one that can be avoided if proper precautions are taken.

Eczema usually commences with a few papules, afterwards becoming vesicles, which rupture within two or three days and discharge an ichorous watery secretion. This becomes dry, forming crusts which when removed

leave a moistened surface that itches intensely; the disease gradually spreads, especially over the parts that have been subjected to this irritating discharge.

If allowed to continue, the secretion becomes opaque, milky, and, as Wilson says, yellowish and semi-purulent, being transformed into *eczema impetiginodes*. The discharge may take on a still more decided purulent character, for instance if the pustules are developed upon the red and tumefied skin around the patch; then the case is one of impetigo.

When it appears in the folds of the skin, as it frequently does upon the neck, buttocks, anterior surface of arms, and posterior surface of legs, where the skin is much thinner and more easily affected, it is called eczema intertrigo.

Small cutaneous abscesses may appear upon the scalp or any part of the body or extremities.

Difficulty is sometimes met with in making a diagnosis between this disease and papular urticaria, also scabies, but the previous history, together with a careful examination, will make the diagnosis certain.

Some person has wisely said that eczema is the keystone to dermatology, and that the physician who properly and successfully treats it is more able to treat any skin disease.

It seems that cleanliness would be the first law to observe, as the poorer children have eczema mainly because they are not washed often enough, yet it may be due in the better classes to too much washing. Then what are we to do? Care for and keep our infants as infants until the time arrives that nature intended for them to eat the food that is intended for older children. There is time enough for them to be fed upon bread, crackers, potatoes, apples, oranges, figs, bananas, meat, etc., etc., after they come in possession of the proper means of mastication—a full set of teeth, or at least a few incisors.

The number of baths should be governed by the opportunities the child has of becoming uncleanly; even then the mildest soap and alkalies should be used, followed by the free application of starch, the whole body to be encased in a fine quality of flannel during both the summer and winter. No starched garments should be allowed to come in contact with the delicate, sensitive skin of any child.

Whenever this disease appears the external use of water

should be suspended until it has run its course, as in many forms of eczema water increases its severity and delays recovery.

If congestion is absent, a weak solution of carbonate of soda (gr. xxx. to Oj. water) should be the only solution applied, and this only once or twice a day. This will remove any dirt or oily matter that may accumulate. The softest fabric should be used in cleansing the skin. Flesh brushes are very injurious and should not be tolerated.

Preparations of glycerine, in fact, all things calculated to beautify the skin and complexion, should never be used, especially with children.

Nature has so constructed the skin that it yields a product for this purpose we can not replace when once it is removed.

The strictest regimen should be pursued and the most active measures adopted to bring about a speedy recovery.

The diet should be strictly milk and farinaceous. Should the attack be of recent date and the patches covered with a thin crust, and the itching be severe (which is generally the case), an ointment composed of oxide of zinc, bismuth, starch, carbolic acid, in combination with a few drops of a four per cent. solution of cocaine, should be applied twice a day spread upon strips of flannel, the whole dressing to be kept in place by a bandage, or if upon the face, a mask should be used, if necessary placing the child in a straight jacket. Three or four grains of bromide of potassium every three or four hours will produce the requisite rest. The amount of carbolic acid and cocaine may be increased or diminished as the case may require. The treatment, whatever it may be, should be of a soothing character.

When the disease has run its course the oxide of zinc should be withdrawn and some milder ointment used, with or without the addition of salicylic acid.

A one, two, or three per cent. solution of camphor will often allay the itching. Dilute hydrocyanic acid in the proportion of one to eight or ten, will also relieve it.

All cutaneous abscesses should be opened early and dressed with simple absorbent cotton saturated with olive oil. There is now a very good substitute for these oils found in the product of the cotton seed.

I have found the sixtieth of a grain of arsenious acid after each meal of great benefit, children of this age bearing

it very well. The dose may be increased from one sixtieth to one thirtieth and even more, without any serious consequences.

This remedy, however, should not be used if there is extensive congestion and tenderness, but on the other hand calomel should be given in one twentieth of a grain every two hours for several days in sugar of milk.

Like all forms of mercury, its action seems to be increased by trituration. This I believe to be the most satisfactory way of administering this drug.

Congestion should be allayed in all skin diseases before further treatment is attempted, and should be done by calomel given in this way.

Especial care should be taken not to expose the affected surface to heat or cold or a bright sunlight. Drafts are also injurious.

I do not think it is necessary to cut off the hair in this class of children, as was once the custom and as is still done by many, where the disease involves the scalp; besides, many parents would seriously object to such a procedure. It is of great benefit as a protection after the disease has subsided, thereby more than compensating for the inconvenience, for that is all it amounts to during the stage of incrustation.

The use of poultices which are only to soften the crusts should not be employed, as the ointment will better answer that purpose. They may be softened by being saturated with some kind of oil, the treatment being the same in either the papular or the erythematous variety.

A year's experience with lanolin, separately and combined with carbolic acid, subnitrate bismuth, starch, salicylic acid, oxide zinc, quinine, opium, and lead, enables me to highly recommend it. It seems to be more readily absorbed, besides it has a more agreeable consistency than lard or vaseline.

Prof. Wederhofer (*Fortsh. d. Med.*, from the *Allegem. Wiener Med. Zeitung*) says that "applications made night and morning with linen thickly smeared with lanolin having five per cent. of bismuth subnitrate added is a most excellent remedy in eczema, especially with little children, for it really is tolerated by the skin on account of its forming very heavy fatty acids while other fats and vaseline form

very light fatty acids on coming in contact with the skin, and in children the skin is very sensitive to fatty acids."

The small amount of water that is incorporated in lanolin can and should be extracted by trituration, especially when it is intended to be used in the treatment of eczema.

There is now a modification of von Hebra's diachylon ointment which I have found to be a most excellent preparation. It was originated with Mr. Eisner, of Philadelphia, and is made from a freshly precipitated oxide of lead obtained by adding a solution of acetate of lead to hydrate of potash. The precipitate is washed and dried and mixed with water and olive oil, by heating gently, continuing the process until a saponification takes place and a white ointment is obtained. Care must be observed regarding the heat or the result will be a yellow, sticky product. The whole thing depends upon the manipulation of the precipitate and the heat at which the oil is added.

The original v. Hebra's unguentum diachyli was made by softening diachylon plaster with an equal quantity of linseed oil. The one I mention is whiter, more easily absorbed and is not so glutinous, besides, the odor is more agreeable.

A few dermatologists, mostly however of European cities, have been extravagant in their praises of resorcin as a remedy for eczema. I myself have not seen results in my own practice warranting such expressions, but on the contrary have seen an acute eczema aggravated by its use.

nI my opinion there are older and better known remedies for this disease. Internally, I have found it disagreeable, and in nearly every instance nauseating. There are a few cases that are benefited by its use, but there are other remedies which will better answer the purpose, and are far preferable.

Ichthyol, a remedy suggested by Unna, has also been lately introduced into the practice of dermatology.

It likewise has shared the praises of some of our leading authors, but after a thorough trial has been found wanting. The preparation that is most commonly used, and the one with which I have had the greatest experience, is that suggested by Unna, namely, ammonia-sulphuret-ichthyol.

Although both the internal and external administration of certain remedies is followed by favorable results, as is

the case with the two combined, as much if not more depends upon the management of the child on the part of the person having it in charge than the attending physician.

The moderate internal use of salt with plenty of water is known to have benefited some cases.

While some will require solid others will need liquid food. Many times it is advantageous to take small and frequent meals.

The treatment is separate and distinct in each individual case, and seldom the same.

DISCUSSION.

DR. W. T. CORLETT, of Cleveland: As to the origin of eczema, there is a great difference of opinion. It is believed, in Germany, that it is a local disease. At Vienna, I find that it is customary to treat it with local measures. They claim that the disease disappears and fades away about as soon as if internal and external measures were both used. On the other hand, the French have done a great deal to eliminate this idea and give a better phase to the subject. Dr. Bulkley, of New York, claims that eczema is a constitutional disease; that the skin is in such a condition that local irritation causes the disease and thus it is produced. It seems to me that eczema is sometimes a local disease, as for instance, the baker's itch, Prairie itch, etc., and in people otherwise in normal health, but who have a delicate skin, and which is due to the irritation of the peripheral nerves; that would be localized eczema. Then we have it occur from internal derangements—indigestion and mal-assimilation. It seems to me we are justified in recognizing the two kinds—both external and constitutional.

There are two periods of life when eczema seems to be specially liable: the first is in infancy, or along between the ages of four, five and six years. Then digestive derangements are often followed by inflammation of the

skin. The second period of peculiar susceptibility seems to be at the more mature age, or even in declining age, after the age of 70 or 75. The tissues then begin to decay; the teeth oftentimes are lost, the food is not properly prepared for digestion, and assimilation is interfered with. I have in my mind a case under the care of a Cleveland physician. The patient enjoyed good health up to ten years ago, when her teeth gave way quite rapidly, and eczema supervened as the result. It has continued in spite of all treatment, external or internal, and until the teeth are restored by artificial means the disease will continue. But if the teeth were restored so that she could eat and properly masticate her food, I think the disease would yield.

DR. S. S. THORN, of Toledo: I do not know what dermatologists will say, but it has been my experience that eczema has yielded, without exception, to arsenic. But I use arsenic rather differently from the average man: I begin at the top and go down, instead of beginning at the bottom and going up; for in that case, the system soon becomes tolerant of the remedy and the effect is not obtained; but by beginning with proper doses, I have accomplished what I had failed in before. I begin, with an adult, with twenty drops of Fowler's solution, three or four times a day, astonishing as it may seem, but I fortify that by Hall's solution of strychnine. It will not take the place of teeth, but it will improve the nutrition. It certainly has power in that direction. I begin with fifteen drops, in an adult, and continue it until I find the effect, and then taper down; the result is that the action is much more rapid and positive.

Amputation in Osteo-Cancer of the Limbs--with Cases.

BY S. F. FORBES, M. D., TOLEDO.

There is a surgical maxim which forbids amputation of a limb in the continuity of the long bones in cancerous diseases, but requires that the operation, if done at all, shall be done at the joint above the seat of such disease.

So good an authority as Holmes's Surgery (edition 1882), uses this language: "If the disease can be clearly made out to be cancerous, the whole limb, including the entire bone which is the seat of the disease, ought to be amputated. When the tumor is situated in the leg, this is a matter of comparatively little moment." * * * "But if the tumor affect, as it commonly does, the lower end of the femur, the question becomes a grave one, since amputation at the hip-joint must be performed if the disease is clearly diagnosed as being cancerous."

To show that amputation at the hip-joint is not always necessary in cancer of the lower end of the femur to successful recovery, and to urge that amputation of limbs may be done in the most desperate cases of this disease with fair hope of temporary or lasting cure, is the scope of this paper.

In speaking of bone cancer I do not mean to include osteoid sarcomas—those tumors having bony or calcified striata or points within their radius, nor yet to malignant growths from bone, but rather to cancerous diseases and destruction of the shafts of the long bones themselves. For the former, incision will often be the proper and efficient remedy, but amputation is the only suitable treatment for the cancerous destruction of the bones themselves.

The late Dr. Gross made this class of diseases a special study, and his division of them, as to their origin, into central and peripheral, and as to their histological characters into spindle-celled, round-celled, giant-celled, and so

on, bears evidence of great study and research, and as being withal scientifically correct.

But neither the origin nor the anatomical characters of these diseases are within the purview of this paper, only their clinical phases. Indeed, speaking of the former, Holmes says: "It has not been possible to arrange these various growths in such a manner that a given anatomical shall correspond with an observed clinical character, or to deduce the clinical history from the ascertained anatomical structure, or, on the other hand, to predict, with any approach to certainty, from a recorded clinical history what the microscope will reveal as to their histological characters. From this it must be manifest that we are not yet in a position to classify tumors, either on the anatomical or on the clinical basis, in such a way as to make the classification perfect for our practical guidance."

To speak of these diseases as they are met with by the busy practitioner in his daily rounds, and to offer some suggestions as to their treatment, is what is here intended.

A word as to symptoms: Bone cancer "is a rapidly growing enlargement, generally attended by lancinating pains; sometimes semi-fluctuating, the skin at first pale, with numerous tortuous veins, soon becomes brown or bronzed and eventually involved in the disease." The softness is so deceptive in many of these cases that the physician is certain that abscess exists, and punctures the tumor only to find some bloody serum escape, and then, for the first time, the thought of the malignant character of the disease comes upon him. Add to these local symptoms the general symptoms of the constitutional affection, and the surgeon will rarely err as to the malignant character of the disease before him.

The treatment of bone cancer of the limbs has heretofore been settled into expectant, with internal remedies, excision, and amputation.

As to the first mentioned course, only quacks, or the most timid and unlearned of our profession, follow it; as it is waiting by the side of a fellow mortal as he sinks, usually in great suffering, into an early grave.

Excision is only proper in malignant tumors of the bone where the main shaft and the soft parts are not involved, a fact which can rarely be known except by an operation.

Hence it follows that amputation is all that offers permanently favorable results in true cancer of the bone, and, alas, that is by no means certain.

The following four cases are narrated to sustain the views here advanced:

Case 1st. James L., a lad about fifteen years of age, was seen by a number of physicians, the writer included, in consultation, in the year 1882, at the request of the attending physician and the family, with a view of amputation of the thigh in its upper third. The symptoms narrated above were all present; the pain was especially severe. Emaciation was becoming quite marked, but there was no open sore, nor were we able to detect any great affection of the inguinal glands; and yet it was quite unanimously decided that amputation was not proper, and it was not done. The reasons guiding us to this conclusion were, that we were fearful in the first place that the patient might not sustain the operation; and secondly, that if he did, the disease might return again. And thus we left him in a sort of undecided, I may say cowardly, manner, to go down amidst great suffering to an early grave, which he did in three or four months.

Case 2d. Miss E., a maiden lady about thirty years of age, seen by myself in 1883 in consultation with her attending physician. Upon her right arm, upper and middle thirds, was a large and painful tumor having the above-described characteristics of bone cancer. Although the skin was affected about the middle of the arm, yet there was no open sore, and the condition of the glands could not be well made out. In my judgment there was healthy tissue enough left that could have been obtained from the vicinity of the shoulder to answer as flaps had the amputation been made at the shoulder joint; and yet I rather reluctantly acquiesced in the decision of the lady herself, her friends and physician, that no operation should be made. And thus this poor woman duly took her place in the silent chambers of the dead in about five months, having suffered horribly during the latter days of her life.

Case 3d. Mrs. S., a married lady, about twenty-five years of age, mother of three children, the youngest seven months old, which she was nursing, was seen by myself first in September, 1883. A large tumor occupied the

right limb from the knee to the upper third of the thigh. It was very painful, and there were all the symptoms described above of bone cancer. I learned that the patient was in the care of an irregular, and that he had attended her in the confinement and since. She was taking enormous doses of opium, with the effect of only partially relieving her sufferings. There was a small opening in the skin on the outer side of the thigh, made by her attendant a week before my visit, who told her she had enormous abscess of the thigh, which he would cure by his puncture (although she had remained in bed since her confinement, seven months before). He obtained only a little bloody serum, and a small fungus now protruded from the wound. The patient was greatly emaciated, and would evidently die in a few weeks. The diagnosis was easy in this case, and I at once resolved to offer her the only chance of recovery, through an amputation of the thigh as near the body as it could be made without disarticulation at the hip joint. Both herself and friends decided to have the operation, and the woman was put upon a generous diet, tonics, and ordered to wean the child. In one week the operation was made, as near the body as would permit the use of the Esmarch rubber cord. No blood was lost, no shock was experienced, or scarcely none, and the woman went forward to recovery in the most rapid manner. At no time during the little reactionary fever which followed the operation did the temperature exceed 100°, and the stump was entirely healed by the eleventh day. From the hour of the operation the patient expressed herself as being comparatively free from pain. This woman soon became well and strong, and useful in her family, but in the fall of 1885, she contracted lung disease, and died in a few months of consumption. Nearly all the adult members of her family are dead of the same complaint. Up to the hour of her death there was not the slightest symptom of a return of the cancerous disease, either in the stump or any part of her body.

Case 4th. In July, 1885, I was called to a neighboring village to see Mr. V., a young man about twenty two or twenty three years old, suffering from an enormous tumor of the knee and right thigh, as far as the upper third. As in the previous case, the patient had been in the care of

an irregular for about a year and was getting steadily worse. The limb was exactly twice the size (near the knee) of the other, and presented at one view a most perfect picture of malignant disease. The diagnosis was easy and rapid, and I told the patient and his friends at once that amputation, immediate amputation, was all that could be done. They accepted. On the second day thereafter I removed the limb in the upper third of the thigh, having barely room between the trunk and the flaps for the application of the Esmarch rubber cord. There was considerable hemorrhage, owing to the numerous small arteries which studded the flaps. There was not much shock, but considerable exhaustion, owing to the loss of blood and the extreme heat of the weather which prevailed at that time (July 16th). However, the patient reacted well, and went forward to perfect recovery in rather less time than usual after such operations. Up to this time, June 15th, 1887, the patient has continued entirely well, and free from any return of the disease.

Of the foregoing four cases, two were left without amputation, and promptly died; while the two others, which were in my judgment in a worse condition as to chances of recovery through an operation, were operated upon and both got well.

The lesson of even these four cases is to me that in all cases of extensive carcinomatous disease of the limbs—amputate: except where there is almost an absolute certainty that the patient cannot survive the operation, or the glands and general system are so permeated with the disease that death will follow from this cause in a short time.

One thing surgeons should bear in mind when deciding upon the advisability of amputation in those desperate cases, where the patient has been a long time affected, and the limb very extensively diseased, and that is, that the system has already become accustomed to the loss of the limb, so to speak; that it is dead already, and serving no purpose in the economy, but only acting as an irritant, and its final, formal separation by the surgeon's knife creates no shock (when done without loss of blood), and relieves the body of an irritant (and a poison even later), which slowly but surely drags it into the grave.

Doubtless all surgeons are aware of this fact, but few attach to it all the importance it deserves.

Another fact may be taken as proven, I think, by the results in the operation upon the cases reported: and that is, that it is not always necessary to go to the joint above the disease for the point of amputation; a fact of vital moment. For instance: I do not believe that either of the above patients operated upon could have withstood amputation at the hip joint, but were able to bear amputation in the upper third of the thigh, where the shock is much less, and where the hemorrhage can always be kept within bounds.

I believe it would be better to make this latter operation in cases where there is quite a reasonable certainty that the disease can not be cured, than to let the patient go down to death without making any attempt to stay the dread disease. And for two reasons: 1st. That suffering is allayed, life is lengthened, and time and strength gained so that amputation at the hip joint may afterwards be done, if thought advisable; and 2d. When a return of the disease does take place after amputation, it often seizes upon some internal organ, where death is less painful and less shocking than the hideous ulcers which take place upon the external surface.

Of the exact origin and histological characters of the two cases above reported which were operated upon, I am unable to speak—but presume, as there was no return of the disease, that they were of the peripheral variety, as this is the kind which authors admit may not always reappear. As no microscopic examination was made in either case I am unable to say whether the variety was spindle-celled, round-celled or giant-celled, and can only speak of what was observed on a free dissection of the limbs after their removal. They were so nearly alike that a description of one will answer for both.

On making a long section of the limb in front, the knife sank after penetrating the outer envelope of skin, etc., into a softened mass of heterologue or foreign structure, or rather material, semi-fluid, reddish-brown in color, and there was entire loss of the end of the femur, including the articular surface. Four or five inches above the joint, broken and disconnected pieces of the shaft were found,

and still above the bone in situ; and at the point of section it appeared healthy. The patella was extensively diseased, indeed almost gone, but the upper end of the tibia was not extensively affected. In one word, the whole lower third of the thigh and much of the middle was transformed into a diseased mass having no resemblance to a natural limb. Of course walking would have been wholly impossible, and was not attempted for many months before the operation.

In conclusion, I have only to say that many cases similar to the above are left to die without an operation, as was the fact with the first two reported; and I believe it is our duty to operate in all cases like the four reported. We cannot increase the ratio of death by it, for they will all die anyway in a short time, amid great suffering; but we shall certainly increase the number, not only of permanent recoveries, but of temporary recoveries—that is, lengthen the days of the patient—and we all know that life is but an increase in the number of days. Furthermore, we shall lessen the suffering in all cases of this terrible malady—a fact that no surgeon or physician should ever forget. If we cannot extend life into the fullness of time set for mankind, but can protract it for a few months or years, and render it more bearable and happy, it is surely our duty to do it at all times, and upon all occasions.

Phytolacca Decandra.

BY G. A. COLLAMORE, M. D., TOLEDO.

This is the ordinary poke weed of our swamps and old fields. I shall confine myself to a brief notice of its therapeutic uses, so far as known.

In the United States Dispensatory it is described as having emetic, purgative and narcotic properties. In over-doses, it produces violent vomiting and purging, and even convulsions. It has occasionally caused death, the symptoms being violent purgation followed by coma. It is also classed as an alterative, which is a convenient term for expressing our ignorance of its therapeutical action. It has, no doubt, a powerful action on the nervous system. It is used as an ingredient of various medicines against rheumatism, syphilis, and other so-called blood disorders.

"Dr. Biggers, of La Grande, Oregon, (New Remedies, July, 1873,) states that he has found the fluid extract of phytolacca an excellent remedy in inflamed and painful mammæ, having frequently employed the remedy, and *invariably with success.*" (Italics mine.)

The immediate incitation to the preparation of this paper was the reading in a medical journal some time since a discussion on the proper treatment of inflammation of the mammæ. Turpentine stupes were recommended by one, fomentations with ammonia by another, compression by bandages, by adhesive plaster, by rubber bandages, by others, aconite, belladonna and other drugs internally, but not the least mention of poke-root. And yet it is no new remedy. I have used it for the past fifteen years; I have seen mention every now and then of its valuable properties in journals and elsewhere, and I desire to call your attention to its great usefulness in these cases, if by chance there are any here who are not familiar with it.

I know of nothing more disgusting and exasperating to the physician or more distressing to the patient than the occurrence of suppuration in the puerperal mammæ.

After days, perhaps weeks, of pain, fever, sleeplessness, anorexia, mental anxiety and physical torment, pus is formed more or less deep in the gland, the knife is applied, the breast is excavated into abscesses or riddled with sinuses, months elapse before healing is complete, the lacteal function is destroyed and the breast is wrecked and ruined. The experience of all here present will declare that this is no fancy picture. *Haud inexpertus loquor.* It will be conceded that it is for the interest of physician, nurse, and nursling, for every reason, mental, physical and esthetic, to preserve the integrity, the function, and the beauty of the female breast; and that any remedy which can be relied upon to abort, subdue or avert mammary inflammation should be widely known and thoroughly tested. That remedy I claim we have in the phytolacca. With reference to it I can reiterate the assertion of Dr. Biggers that for the past fifteen years I have found the "phytolacca an excellent remedy in inflamed and painful mammæ, having frequently employed it and *invariably with success.*"

As ague is suggestive of quinia, as I have never had a case of eczema which I could not cure with arsenic, so I have never failed to subdue puerperal mastitis by the use of the poke-root.

Its exact physiological action is somewhat uncertain, but it evidently exerts a powerful inhibitory influence on mammary hyperemia, probably by its action on the nervous system, especially the vaso-motor nerves. I have never experienced its emetic, cathartic, or convulsive action, though I have frequently prescribed it in full, if not in large doses, but its narcotic effects have been often noticed. It is no uncommon thing for the patient to ask if there was not laudanum or other opiate in the medicine administered. As we cannot explain the action of quinine in suppressing malarial manifestations, or of arsenic in affections of the skin, so we must be content to accept the fact of the potent influence of phytolacca in mammary inflammation as a specific action of the drug.

Its remarkable properties in the above named affection have suggested its use in the inflammation of similar or allied glands, and I now usually employ it in cases of orchitis or epididymitis, in which cases the pain and ten-

derness rapidly subside, though, as I use other local remedies, I do not know how much of the effect is to be attributed to the drug in question.

Reasoning from analogy it would seem that this might prove a useful medicine in inflammation of other glands, as the lymphatic, etc., but I am not aware of its having been employed in that way, unless its use in syphilis may be so construed.

In conclusion, I wish to say a few words as to the preparation of the medicine to be employed. You are familiar with the remark of the man who asserted that there was no *poor* whisky, although some might be better than others. My experience has been that all the fluid extracts which I have prescribed have possessed more or less therapeutic virtues. But there is a wide difference in potency in different manufactures. So I have for some years ceased to *prescribe* the poke root. I keep in my office a reliable preparation of the drug and dispense it as required. I have ordered as much as a teaspoonful of the fluid extract—procured from a drug store—every four hours, without producing any more powerful effect than I now gain from ten drops of a reliable preparation. It is important and necessary to push the remedy in urgent cases to physiological tolerance, though I have never seen any ill effects, in fact, no effect, outside of the subsidence of the mammary inflammation, except a tendency to somnolence.

I also employ the medicine externally, rubbing it into the gland frequently, or applying it on a cloth, and in many cases this appears to add to the efficacy of the medicine.

Finally, gentlemen, the next time you encounter a case of puerperal mammitis, bear in mind the virtues claimed for phytolacca and make a trial of it in the manner above indicated, and it is my opinion that you will not be disappointed.

The Pathogenetic Relationship of Physical Conditions to Insanity.

BY J. A. WRIGHT, M. D., TOLEDO.

The dominating influence which certain conditions of mind extend over the various corporeal activities; the profound disturbance of physical function which may be occasioned through their agency; their modifying operation upon the hidden processes of growth and nutrition—the fact that ideational activity and emotional excitement may derange the action of the heart, pervert the secretions, and change the routine working of organic functions—clearly attest the authoritative ascendency of the mind over the body. This sway of psychical over physical nature is so universally known and amply illustrated in every-day life that it is readily understood and accepted as a great physiological law, the truth of which is so evident as to prevent the possibility of its being controverted. But, while we may not presume to question this truism, nor attempt to detract from its obvious importance, we should not forget that, as a matter of parallel significance, the members of the animal economy, in turn, exert a remarkable influence upon perceptional consciousness and the different mental processes, which—to take a familiar illustration—in the event of a slight disturbance of the bodily functions, causes all objects to be perceived through a dark and gloomy medium, and leads to morose and melancholy feelings; and, as the result of their healthful activity, creates a feeling of exalted *cœnæsthesia* which lends to the whole world the pleasant hue it wears when seen through a Claude-Lorraine glass. Reasonable deduction might well lead us to infer that if an exceedingly limited departure from normal activity in some remote portion of the body is thus followed by such positive modification of mental states, a further extended and more pronounced disorder may, under suitable conditions, result in serious disturbance, great impairment, or even permanent derangement of men-

tal function; and that this is often the case is a pathological fact long familiar to the alienist who, not infrequently, finds adequate cause for the prevalence or persistence of insanity in some unusual excitement or morbid activity in one or more of the bodily organs.

The physiologist apprehends that between different sets of organs there exists a close bond of what may be termed sympathetic affinity. Disturbance or excitement in one member of such a set meets with ready expression in another often quite remote from the original source of distress. The stomach and digestive organs, generally, resent the enlargement of the uterus during the early months of gestation in a manner which often affords the patient great distress to endure, and the physician great difficulty to alleviate. Severe pains distant from the portion affected mark the progress of various hepatic affections. Injury to a part is sometimes extended so as to involve a whole member in active discomfort. Irritation of the extremity of a nerve is propagated along its trunk to the spinal cord and thence reflected to some part which responds with disagreeable emphasis. These expressions of the functions of sympathy and reflex action are known to every one and the fact that such relationship obtains between different parts of the economy enables the physician to locate with precision the presence of morbific action or physiological excitement in organs more or less foreign to those in which the abnormal condition finds utterance. But with the brain, "the lordly ruler over all," there is not simply a casually respondent sympathy with one or two organs of the body, but a close and intimate communionship with all. Needful innervation is bountifully supplied to the parts near at hand as well as to those more distant, not alone with equitable impartiality, but, in particular instances, in such volume as will provide for the consequences of its prodigal expenditure or the necessities of organs which may be the seat of disease or developmental change. It can readily be believed that the source of this lavish supply of energy, from inherent dearth of resource, lack of recuperative power, or excessive and exhausting demand upon its store, may itself be depleted and manifest its enervation by diminution or impairment of its functions and, when this condition obtains, we call it insanity. Were the frequency with

which mental disturbance results from such influences not already fully understood, it might be safely surmised from the known intimacy of connection between the brain and all other parts of the body, as well as from the sympathetic participation of the former organ in the multifold disorders to which the latter is subjected. Then, too, familiar illustration is not wanting to demonstrate the truth of this proposition; witness the alarming and frequently fatal convulsions of childhood; the irritability of temper and extreme hypochondria of the dyspeptic; the great emotional excitement of the sufferer from uterine disease; the confident but illusionary hopefulness of the doomed victim of consumption, and many other examples, all of which involve derangement of mental coherence and proceed from causes acting at a distance more or less remote from the seat of the operations affected. But the experience of those whose province it is to labor in the field of medicine assigned to nervous and mental disease, has so conclusively shown that physical conditions are greatly effective in causing insanity, that logical deduction of the same fact, though corroborative, is quite supererogatory.

To invite attention to some of the physical states, morbid and developmental, which more commonly act as etiological factors of insanity; to discuss the influences which favor the onset of this most undesirable of visitations, and to estimate the conditions which facilitate, retard, or prevent the reassertion of mental supremacy, are the objects of this paper.

The statistics of neurology show that nearly every disease which afflicts humanity, as well as every physiological change with its attendant excitement, may, under favorable circumstances, operate as an inducement of insanity. Many of the exciting causes, as given in medical certificates upon which patients are committed to asylums for the insane, and as ascertained by examination after admission, vary from the slightest bodily injury and the most trivial disturbance of the feelings to the greatest disorder of health and the most profound impression upon the emotional centers. It is, of course, readily manifest that nearly all of these influences are, *of themselves*, insufficient to effect perversion of mental function. Of necessity, there must exist some inherent weakness, some

peculiar predisposition, which only awaits the appearance of suitable impulse to institute the morbid processes of which the real cause already existed in a latent form. If this predisposition were not requisite, then bodily disease, emotional disturbance, the physiological revolutions incidental to the growth of the body and establishment of new functions, would inevitably, instead of occasionally, result in intellectual dethronement; but, the fact that unnumbered human beings have been subjected to these influences and have suffered no loss so far as mental coherence is concerned, proves that conditions favorable to the onset of insanity must exist before these causes can, as a rule, be operative.

This predisposition is the outgrowth of vice, infirmity, and misfortune. It may descend by heredity from remote ancestry, or be acquired as the result of various unfavorable influences operating during a brief period of one's existence. It may be of such marked intensity as to respond to the slightest exciting cause, saturating the individual, as it were, with the most combustible of explosives which needs but the smallest spark to effect his destruction; or, it may be so slight as to resist any ordinary impulse, and, for that matter, frequently enable him to pass through a long life without evincing any evidence of its presence. It is a matter of interest to the speculative philosopher, whether or not a vast majority of the human race are not more or less liberally endowed with this pernicious possession; practically, it is not of the slightest consequence, so long as it is not present in such degree as to endanger mental integrity in the presence of suitable excitement. The pathologist, however, should never lose sight of the important bearing which this tendency has in the institution of insanity even though he may ascribe its occurrence to the disturbing element which provokes its onset.

The frequency with which insanity results from or is associated with various general and local morbid states, makes its consideration in the light of a possible complication or sequence of these conditions of special importance to the practicing physician. As has been seen, the probability of its appearance will be greatly strengthened by the existence of great hereditary or acquired tendency

which, in the absence of more positive knowledge, may sometimes be presumed from manifestations of extreme nervous instability and incoordination of mental function; these indications obtaining greater significance when the severity of the existing processes—such as, intensity of fever, agonizing and continuous headache, the presence of hallucinations or illusions, lasting delirium, or other evidences of profound encephalic disturbance—may appear to threaten the mind's integrity. Unfortunately, however, these data are often only regarded as signs by which the termination of the disease in recovery or death is estimated, and the warnings of the approach or the incipient presence of the most unfortunate of conditions is thus overlooked.

As a result of physical disease, insanity often makes its appearance as a sequel to febrile affections. It also results from and accompanies phthisis pulmonalis, syphilis, cardiac, hepatic, and nephritic disease, and rheumatism. The form of insanity evinced is as varied as these causes; post-febrile insanity being generally maniacal and tending to dementia. It most commonly follows typhoid fever, although a peculiar mania is sometimes occasioned by persistent malarial poisoning; this, however, is quite distinct and *sui generis*, being characterized by remissions or intermissions between paroxysms of excitement, the disorder usually abating under the influence of anti-malarial treatment, while that following enteric fever is estimated to result unfavorably in 65 per cent. of all cases occurring.

The tuberculous diathesis bears most intimate relationship to insanity. Phthisical or scrofulous ancestry, instead of transmitting the characteristics of their disposition to disease, not infrequently have insane offspring. Schroeder Van der Kolk, who has contributed much to our knowledge of insanity, in speaking of phthisis as one of the causes, says: "It is remarkable when in the very same family, some of the children suffer from mania, or melancholia, and the brothers or sisters who remain free from these diseases die of phthisis. This I have observed so many times that I can not regard it as a mere accident. . . . . More than once I have observed that a far advanced case of pulmonary phthisis came quite to a standstill, so that all phthisical symptoms, the cough, the hectic fever, and so forth, ceased in a short time. But thereupon a mania or a

melancholy occurred with which the patient, who shortly before could scarcely speak, on account of the violent cough and copious expectoration, breathed freely and deeply, talked without coughing and indeed even shouted." In my own experience, I have frequently observed this obscuration of these common objective signs of phthisis. The cough and other distressing symptoms being entirely absent during severe paroxysms of insane conduct and appearing to some extent if a milder period occurred, thus giving the insanity the appearance of alternating with consumption.

Syphilitic insanity is of common occurrence; is one of the few forms for which a well defined line of treatment is indicated, and is also one of which a gratifying termination can often be expected. It is preceded by severe and persistent headache, the intensity of which is very much more marked during the night. As the intra cranial syphilitic processes, which obviously cause this uncomfortable manifestation, are developed, various evidences of mental disturbance are displayed. Great impairment of memory, judgment, will, and the intellectual powers generally, are confusedly intermixed with visual and auditory hallucinations and illusions. In a number of cases, convulsions of an epileptiform character are exhibited, followed by motor or sensory paresis. Aphasia, amaurosis, strabismus, and various disorders of the special senses, are apt to accompany the march of the disease, sometimes two or more of these conditions co-existing, though it is rare to find more than one of them well marked in the same individual. The natural termination of this form of mental disease is in utter dementia.

During the progress of the case, the characteristic cranial pains, nocturnally more pronounced and severe, persist; which, with a history and knowledge of existing syphilitic influences, renders a correct diagnosis easy and beyond reasonable peradventure; and which, even without such evidence, will serve to direct attention to the strongly probable nature of the insanity.

Of the treatment of this form of disease, it is unnecessary to say more than that it is identical with that which is most serviceable in resolving syphilitic lesions occurring under other circumstances. As has been already said, the prog-

nosis under proper conditions as to treatment and environment is very favorable. Even when it is presumed that the grossest intra-cranial changes have been effected, recovery is by no means infrequent, and to the beneficent action of appropriate remedies the seemingly most hopeless cases have responded by speedy improvement and ultimate recovery. The frequency of syphilitic insanity is, without doubt, greatly due to neglect or to too early discontinuance of specific treatment.

Cardiac, hepatic, and renal diseases as well as the rheumatic and gouty diathesis are referred to by authority as efficient exciting causes of insanity; and, really, when one considers the depravity of the vital circulating fluid which prevails in these affections, and the great variation of volume with which it is sent to parts as distant from its source of distribution as is the brain, resulting, as a natural consequence, in the latter organ being either depleted, congested, or poisoned; he will not only apprehend the danger of the onset of mental disturbance which obtains under these circumstances in those who may be suitably predisposed, but he may well wonder that it is not the common instead of the exceptional result of these diseases when persistently prevalent. The prognosis of this class of cases, barring the modifying effects of predisposing dyscrasia, will depend upon the likelihood of arresting the course of the disease which caused the insanity, and re-establishing the health of the patient. In rheumatism, uncomplicated with organic disease of any kind, it is, therefore, usually favorable; in structural disease of the heart, liver or kidneys, unfavorable.

Among the physiological and developmental changes which are likely to favor the onset of insanity, are those incidental to the period of puberty, to the progress of pregnancy and lactation, to the occurrence of the menopause and to the decline of vitality in old age.

The evolution of the generative function and the great disturbance in the economy attendant upon it, have always been exceedingly favorable to the development of latent tendencies to disease of any kind, and we consequently look for the onset of insanity at this critical period in human life; but, though it occurs frequently enough to cause the stage of adolescence to be regarded as one favorable to its appearance, it by no means appears as

commonly as at other epochs. The variety of insanity usually manifested is that which is termed moral or emotional, and is somewhat apt to be complicated with epilepsy. It has been suggested that masturbation is usually the cause of the disorder, but careful investigations show that while a small proportion of cases arise in this source, the larger number are not to be ascribed to it. When it is, the insanity will be characterized by great depression of spirits and disgust of life, and will, for obvious reasons, not be likely to terminate satisfactorily. In a case of this kind at present under my care, in addition to the characteristic symptoms of depression, the patient is subject to singular hallucinations; people are continually watching him and talking to him, although he realizes that many of them are hundreds of miles distant; the burden of their remarks is tantalizing and insulting; the grossest outrages are perpetrated upon him by invisible persons at all hours of the day and night; visions of ill-disposed persons are often present, and, by their insulting suggestions, goad him to the highest pitch of fury. He is wholly absorbed in these hallucinations, and efforts to attract his attention to other things are quite useless.

Pronounced insanity during the course of gestation is also rather infrequent. Dr. Batty Tuke has collated the particulars of twenty-eight cases and finds that melancholia was the chief form evinced and that seventy-five per cent. terminated in recovery. It is of passing interest to note here that the morbidity of taste and the very common changes in the feelings, peculiar to the female during this period, are regarded by competent authority as manifestations of abnormal mental states.

Like the preceding, the insanity of lactation is somewhat uncommon, of the class melancholia, and usually terminates in recovery. It is of practical moment to know that its most common exciting causes are the exhaustion, and impoverishment of the blood induced by long continued nursing, poor nourishment, bad hygienic environment, etc., and its obvious means of prevention, the removal of these causative conditions.

The term "puerperal insanity" is properly limited to mental disease occurring during the period extending from the beginning of labor to the natural termination of the

lochial discharge; but it is often made to include that which appears during the course of pregnancy and even that which occurs during lactation. The comparative frequency of this disorder, its appearance at a time when the hope and anxiety of friends are keenly excited, and its untoward presence, therefore, doubly unwelcome; and the fact that it often makes its onset while the accoucheur is still in attendance and seemingly responsible for the successful issue of his case, entitle it to more than the transitory consideration which can be here bestowed upon it.

The statistics of this form of insanity are very conflicting and apt to confuse the student, for the reason that some compilations include the cases occurring during pregnancy and lactation while others are limited to those of the puerperal condition proper. If we adopt the former, we find that, including mild cases, about 6.4 per cent. of all are subject to attacks of mental alienation; if the latter, the proportion recedes to 3.6 per cent. Esquirol estimates that 10 per cent. of all cases of insanity occurring among females is puerperal in origin. Statistics further aver that it is most apt to occur from the first to the fourteenth day after parturition, though the liability to it is not wholly escaped until the sixtieth, which, Esquirol states, is the extreme limit of the lochial discharge. Primiparous females are attacked more frequently than those who have already borne children, the proportion being three to one.

The symptoms are those expressive of maniacal excitement: hence the term, "puerperal mania," so commonly employed. The countenance is usually flushed and expressive of wildness and anxiety; the skin moist and clammy; the secretion of milk and discharge of lochia diminished, and sometimes, though rarely, arrested; the tongue covered with a dense whitish fur; the respiration hurried; the pulse full and somewhat accelerated; the action of the bowels sluggish; the urine a little high colored, slightly lessened in quantity, of increased specific gravity and not infrequently albuminous. In addition, the incessant muscular activity, ceaseless volubility, insomnolence and other indications peculiar to mania, are present in an intense degree. A disposition to employ grossly obscene words and phrases is so common as to be characteristic; so, also, are manifestations of bitter hate towards the child, husband

and dearest friends. A differential diagnostic point of importance is that there is no undue tenderness on pressure over the abdomen. In the majority of instances (statistics make it 76 per cent.), after a period varying in length from a day or two to several months, there is a gradual retrogression of these symptoms and recovery takes place. Of the remaining 24 per cent., nearly all terminate fatally at different stages of progress; death resulting from maniacal exhaustion or some intercurrent complication. A small proportion of cases pursue a course which terminates in complete dementia.

Apart from the influence of predisposition, which is recognized as being especially effectual in promoting puerperal insanity, it is of interest to note that there are certain conditions which greatly impel its onset. Anything that may unduly affect serenity of mind, such as the conveyance of intensely exciting information; deep grief over the loss of a husband, and forebodings as to the future; the realization of increased hardship by those who may be scantily provided with worldly goods; the disgrace and misfortune attending the birth of illegitimate children; are all factors which have shown their etiological potency and which, in proper consideration of all parturient females threatened with intellectual disorder, should be prevented, removed or assuaged. Difficult labors and the birth of dead children are conclusively shown to be much more commonly followed by insanity than normal deliveries of living offspring. The presence of albumen in the urine is also of significant importance as indicating the probable retention of urea in the blood which, in adequate proportion, is, of itself, amply sufficient to effect perversion of mental function.

The very general disturbance of health which precedes and accompanies the final cessation of the menstrual function causes this epoch to be an eminently favorite one for the appearance of insanity. Dr. Tilt says that between 3 and 4 per cent. of all women become insane at this period. Dr. Bucknill, the eminent English neurologist, comments upon this statement by saying that it is probably an underestimate. So far as my limited experience goes, it attests that climacteric insanity occurs more frequently than any other form of mental disease among females. In point of prognosis, it can hardly be regarded as favorable; more

than one-half of all cases remaining permanently insane. The form of disease is variable, but is usually melancholia and terminates in secondary dementia.

Among the immediate provocatives of climacteric insanity, uterine diseases and dislocations rank prominent; although any chronic disorder, organic or functional, may, at this impressionable time, arouse the latent expressions of what Maudsley calls the "insane temperament."

In old age the psychical as well as the physical powers, yielding to the inevitable consequences of the decline of vitality, become feeble and uncertain in their operations. This impairment of its functions is not, however, so much the result of the mind's insenescence as of the natural decay of material structures. The tottering walls, as it were, lessen the security of the citadel, so that hereditary enemies easily accomplish its overthrow. When this condition of mental debility becomes extreme, it constitutes senile dementia. It might seem, on slight consideration, that the term dementia, as applied to these cases generally, is misleading, as very many of them manifest, at their onset, an exaltation and inco-ordination of the mental faculties, such as that which commonly obtains in the initial stages of mania; these, however, are speedily followed by gradually increasing indications of fatuity, and are simply introductory to

"Second childishness and mere oblivion."

Yet, despite this almost physiological tendency, and the promptings of inherent predisposition, intellectual vigor may often be retained until a green old age, in the absence of certain conditions which expedite its destruction. Illustration of this is not wanting: Benjamin West continued to exercise his art with unimpaired skill until he was eighty-two, "when he died," says one of his biographers, "retaining full mental vigor to the last." Richilieu, with mind clear and vigorous, though shattered in physical constitution, lived to the age of ninety-three. Dr. Samuel Johnson died at the age of seventy-five. He maintained his reputation for brilliancy of intellect and controversial belligerence to the end. Three years before his death he completed and published his last work, "The Lives of the English Poets." Sir Isaac Newton's last contribution to

science was that of writing a preface to the third edition of his "Principia," when he was eighty-three. Henry Ward Beecher died at the age of seventy-four, and was active and unrivalled in pulpit oratory up to his last illness. Prince Von Bismarck, chancellor of the German Empire, and probably the most powerful director of European affairs now living, is seventy-three. Gladstone, at the age of seventy-eight, displays great mental vigor and unimpaired oratorical skill. Pasteur continues to contribute to accurate scientific knowledge, and to gather fresh laurels, although over sixty five. History is replete with similar examples and often seemingly contradicts the aphorism of Cabanis, that "In old persons, the feebleness of the brain and of those functions which originate therein, give to their determination the same mobility, the same characteristic uncertainty, which they possess during childhood."

Prominent among the influences which precipitate senile insanity, is intemperance in the use of alcoholic liquors, and, more especially, the immediate effects of a prolonged and excessive potation. Slight apoplectic and paralytic attacks are prone to be followed by its appearance. Deep grief over real or imaginary woes, and business worry are also cited as common causes. Many prominent speculators and business men prematurely terminate their careers in dementia as a result of the dangerously high pressure of competitive energy which their vocations require; while one of England's celebrated poets, Robert Southey, who became its victim, succumbed to a severe domestic calamity following upon many years of uninterrupted literary work.

In these observations on the nature, course and consequences of mental alienation occuring as the result of precedent or intercurrent corporeal disease and developmental change, I have by no means suggested more than a tithe of the physical conditions which may eventuate in insanity, but, inasmuch as those to which reference has been made are among its most common causes, and, at the same time, are of themselves among the frequent occasions for the engagement of medical skill, they may be submitted as fairly typical illustrations of the great class to which they belong, and as sufficiently suggestive to the medical man of the expediency of bestowing due attention on the

important pathogenetic influences which somatic states may exert upon the mind. In addition to this consideration, a recognition of the fact that the subject here chosen is essentially allied to one of the special departments of medicine has led me to advisedly refrain from dwelling on much that might be justly regarded as belonging to its complete treatment. In justification of that which has been said, let me submit, by way of conclusion, that, in every department of medicine, there is a certain neutral territory which should be of interest alike to the general practitioner and the specialist, as constituting the borderland in which the province of one gradually merges with that of the other, and with the landmarks of which it is the duty of both, as competent members of the profession, to be familiar; and, in the department of nervous and mental disease, there is clearly no field which possesses the features characteristic of this common frontier to a greater degree than that to which attention has been here directed; so that even the moderate effort at tillage which I have attempted may at least indicate the promising nature of the soil, justly challenge the diligent worker to its more thorough and systematic cultivation, and lead him to expect, with full assurance, an abundant harvest of valuable food for thought from which will be evolved true guidance for future conduct.

MEDICAL EXPERT TESTIMONY.

BY F. H. DARBY, M. D., MORROW.

Medical expert testimony ought to be the noon-day sun of science, shedding its clear white light on every case to which it is summoned. To be valuable and invulnerable, the witness must be so thoroughly versed in the subject under consideration as to at once command the respect of court and counsel. He should give an impartial interpretation of facts, full, definite, comprehensive. Not a decision of the case, but such an explanation of phenomena and application of scientific principles as shall give every existing fact its due weight, and enable the blind-eyed goddess and her myopic votaries to arrive, if possible, at a correct conclusion. Medico-legal science and its sharp-sighted hand-maiden, chemistry, have kept fully abreast of the onward march of progress. Their calcium light makes plain many heretofore occult subjects. Microscopists with unerring certainty, hold up to view the death warrant on every blood globule shed by the red hand of the assassin. The alienist, surgeon and chemist, one or all, are indispensable to the administration of justice in a very large per cent. of criminal cases; while the scientist, artist and artizan are in like demand in civil actions. The former most interest our profession; hence, in this paper, whatever I may have to say, will have reference more particularly to the office of the medical expert.

We are often called, professionally, by the courts to give opinions on mooted questions in chemistry, pathology and morbid anatomy. To illustrate: a quarrelsome husband, suffering some mental aberration since a former attack of hemiplegia, and his intoxicated wife, who, that morning, had threatened to commit suicide, engaged, as they had sometimes done before, in a door-yard fight in the presence of witnesses. The wife took refuge in the house and barred the door. They fought through a window a short time, when the husband broke open the door and entered the room. Soon cries of murder were heard, recognized

as coming from the wife; witnesses rushed to the rescue and were met at the door by the husband with the announcement and request, "My wife has killed herself, run quick for the doctor!" She was found lying on the floor, alive but insensible, profusely bleeding from a cut across the neck six inches long and deep enough to extend half way through the larynx and one-third of the way through each jugular vein. Death ensued in a very few minutes. The carotids were intact.

A recent contusion was found over the left temple, apparently caused by a blow or collision with some blunt object directed with a force sufficient to drive the outer bony wall of the orbit into its cavity. A bloody pruning knife was found near deceased, on the floor. The clothing was cut on top of right shoulder, and numerous minor cuts, contusions and scratches were found on the hands and face, which, together with the presence of a club, poker and tufts of hair on the floor, indicated a sharp, quick and decisive combat. The husband was arrested. No blood stains were found on his hands, garments, or the walls or furniture of the room.

Was it homicide or suicide?

An inquest was held, and the coroner rendered a verdict of murder. In the trial court the defense was made on the theory that the wound would immediately gape; that the accused could not have inflicted it without getting blood on his hands and clothing from the thyroid artery or its branches, which they assumed to have been cut—a matter not investigated at the post-mortem. An array of paid experts (?) were found to be in readiness to advocate that theory. A physician who was present at and assisted in the autopsy was called by the State, properly sworn and interrogated as to *all matters of fact*, especially those appertaining to the incised wound across the throat, to which he answered, "to the best of his knowledge and belief;" after which the State's attorney went over into the domain of expert testimony and deftly endeavored to draw witness over after him by asking and demanding answer to the following hypothetical question, viz: "*State whether in wounds like this, there would be immediate gaping, or would the lips of the wound for a time remain in contact or nearly so?*" Which question witness declined to answer without extra compensation.

Here we have a specimen case, an exceptionally intelligent judge and jury are put into full possession of all the facts, but from want of technical knowledge of the anatomy and physiology of the parts involved, they are unable to interpret their significance and bring them to bear upon the detection of crime. An innocent man may be hung, or a cut-throat turned loose on the community to cut somebody else's throat.

Had stains been found on the prisoner 's garments, there would have been further demand for the scientist to determine, first, if they were blood, and if so, whether animal or human. The necessity of such services to the courts must be apparent to all. There is still a disposition on the part of a few to ridicule the more modern idea that experts are employes of the court and must therefore be paid. Their arguments, however, are so utterly transparent as to be unworthy even a passing notice by this or any other intelligent scientific body. They are the offspring of mercenary motives, such as appeal to individuals who want the earth and somebody to 'tend it for them. They dub it "a tax incident to citizenship." Those economists (?) "who put a penny in and take a shilling out," go so far as to unjustly criticise and misrepresent the better systems adopted and long in use in older and more experienced countries. We know about the popular sneer that Young America puts on towards the alleged "effete monarchies of Europe," but the fact remains, that human nature is the same the world over, and that a policy good for the king is equally good for the crown prince.

Two things are becoming daily more patent: First, the character of expert testimony is improving, is more valuable. Secondly, to procure it litigants, including the State, must pay for it, or else do without it.

Ever and anon an echo is heard from those who have enough moral stamina in their make-up to resist the unreasonable demands of selfish and picayune courts. A venerable physician in this State, and an honored member of his local county society, has quite recently questioned the right of the U. S. Pension Bureau to compel him to give testimony repeatedly, without a reasonable compensation. Legislatures in states where laws do not already exist are favorably considering the subject with a view to enactment

thereon. Altogether the signs of the times point to a better outlook for this heretofore much neglected class of court employes, or officers.

That our well-known and confessedly faulty method of calling and examining experts, has nothing to recommend it, save a sickly sentimentality, we presume this body and a very large per cent. of the bench and bar will readily admit. Let us then proceed to a brief review of the systems in vogue in other states and countries, with a view to recommending for adoption anything that may be for the better. "Prove all things; hold fast to that which is good," bearing in mind that reforms are only accomplished little by little, inch by inch. It took the Lord Chief Justice of England half a century to give up the idea of hanging witches. Let *us* live in hopes, though we may die in despair.

In France, litigants may agree upon experts, otherwise the court appoints; in the latter event, not less than three. If parties to the action agree to a less number, it is so ordered. With them is appointed a referee. The order of appointment must set forth in writing, specifically, the question to be passed upon. The report must be in writing, signed by all the board, even though there is a dissenting minority, but the report must set forth the dissentient's views and the reasons therefor. *Avocats* or barristers are not allowed to appear before them. Litigants may be represented by an officer known as a solicitor, who brings before the experts only those specially skilled or learned in the subject matter under consideration. While any person may be chosen as an expert, yet as a matter of fact, this class of court officers are selected from well-known and qualified specialists, called *expertes assermentes*. It is their peculiar and proper duty to enlighten the court, and not blind or embarrass it. They virtually occupy the position of judge, so far as the subject matter to them referred is concerned.

In Germany, the state appoints experts. The distinguished honor is only conferred on those who by careful previous examination prove themselves competent. Courts are not allowed to appoint or even pass upon their qualifications. Provisions are made for an appeal to a tribunal of experts to which the opinions of the lower experts may be referred for review.

In Prussia, there is an appellate medical commission for the whole monarchy, a medical college with a full-fledged Professor of Medical Jurisprudence in every province, and in every county a physician and surgeon. These latter obtain position by competitive examination, *a la* civil service, the Provincial Professor is a creature of the college officials, and the National Board is appointed by the Crown. The physician and surgeon make autopsies, and inquire into all facts. They test for poisons in cases of suspected homicide; in short, serve as coroners; they submit written reports going over the entire ground, give opinions, cite authorities and precedents. From them litigants have the right of appeal to the provincial and national authorities.

In these countries experts not only receive adequate compensation for their services, but the position is one of distinguished honor.

In Great Britain, even, the expert may be paid according to his "countenance and calling."

In many of the states of this country, and even counties of our own State, remuneration is made, very properly, too, and the amount taxed up as costs. An extended examination of authorities and the opinions of scientific and popular writers on the subject, reveals, I am happy to say, a dispostion to generally accept the theory that an expert is an employe of the court, and, therefore, entitled to pay, and that occupying this high position and receiving compensation for his services make it his duty to bring to this service a high order of talent. We want *fewer* experts and *better* ones. For such the State can well afford to pay. The proposition that an expert in the employ of the State could not do justice to litigants, is a fallacy. As well might you say that judge and jury would render a biased decision for the same reason.

Feeling that time and space are limited, that the subject merits your consideration, and that enough has been said to elicit discussion, I will close by venturing to suggest that the statute should be so amended as to secure the very best talent, limit the number of experts, and provide for them a reasonable compensation.

DISCUSSION.

DR. A. B. CARPENTER, of Cleveland: I would move that this paper which Dr. Darby has so ably presented be referred to the Committee on Resolutions, if such a motion is in order, or that it be referred to the Committee for the purpose of drafting a resolution which might be forwarded to the members of the Legislature calling attention to the disgrace and stigma which has been put upon our brother by being rudely snatched from the bosom of his family and being put in jail, and calling the attention of the Legislature to the necessity of passing some law which in the future will spare the rest of us from this humiliating experience.

DR. J. W. HAMILTON, of Columbus: It seems to me this is going to involve some delay. I think the subject had better be postponed to some later hour in the session. We have a good many papers to read. It ought to have a good deal of attention. At the present time, it would be impossible to give it much attention, with any degree of consistency.

THE PRESIDENT: We will have to dispose of this in some way so as to get by it. This is a matter of importance. I feel as if this body ought to sustain Dr. Darby in his position and I think the association feel that.

DR. W. C. CHAPMAN, of Toledo: I wish to speak to one point. I am fully in accord with the paper. I am in accord with every sentiment expressed by the writer; there is one thing, however, I would like to mention, and that is the fact that medical men, when they appear and testify in court on any question, are divided. This has brought dishonor upon the profession, as regarded by courts in expert testimony. For instance, we had a case tried in this city not long ago in which there was an array of medical talent considered expert. These gentlemen were called in and they testified, and they were one-half on one side of a

question and one-half opposed. The jury didn't know anything about the case, from the statements of the physicians, and the Judge was muddled When this state of facts exists, how can we expect courts or the Legislature to recognize our expert testimony? I have talked with lawyers and Judges about this point; and this it is that has brought our expert testimony into disrepute. They say they are willing so pay anything that is fair, but when they can have equally good men to take two sides on a question, and they are equally strong in their opinions "how can we judge of the value of the testimony?" I think this has a good deal to do in hindering the proper action on the part of the Legislature. I think we ought to be paid. There is no other class of persons who do so much for so little pay as the doctors. A judge will call in an assistant to an attorney and those two persons will argue a law question, and the court will not question a bill of from $200 to $500 for that, but when a doctor comes to testify on work that has cost him years to bring to perfection, he is only allowed a paltry fee. The profession at large have a great deal to do with this. When we can get together as experts in any case and harmonize upon any question, then the courts will listen to us and say our testimony is worth something. This is the point I would like to raise. I believe in being paid for expert testimony. Doctors ought to be paid; but, when one doctor says a thing is white, and another doctor comes in and says it is black, neither the court nor the jury know what to think. If we cannot agree, we had better keep out of the courts, for the honor of the profession. When we can have a board that will decide a question and agree upon it and sign a report, as is done in France, without the lawyers pulling the hair over our eyes so that we don't know what they ask us, as we get a little muddled, then I believe our testimony will be worth something and that we ought to be paid for it. I believe this is a question

which is vital, and that it will bring an expert testimony fee to the doctors.

DR. A. B. CARPENTER, of Cleveland: It seems to me that Dr. Darby has made a good fight; that he has taken a stand and pursued a course which the society should sanction and indorse. I think we can pass resolutions, if the Committee to which it is referred will draft them, commending Dr. Darby's course, and calling attention to the necessity of a good law; this, I think, will not be impertinent nor inopportune at this time. We are the Ohio State Medical Society, and, I think, coming from us, it will certainly do a great deal to heal the wounded feelings of Dr. Darby in the matter. I really hope some suitable action will be taken.

DR. DARBY: I am convalescent.

DR. FORBES, of Toledo: I suppose, under the rules, all papers go to the Committee on Publication. However, the resolution presented is a matter for this society to pass upon. That a committee be appointed by this body, is perfectly in order. Whether that committee should report now, or at the next session, would be a proper question to consider. Possibly the committee had better defer their report until the next session. I think the Chair should appoint a suitable committee, of three or five, to consider the subject and present resolutions, together with memorials to the Legislature upon this question.

It is true that our expert testimony is of little value at present, owing to these differences which have been alluded to; it is also true that all other testimony is subject to the same conditions. No two men to-day who witnessed a transaction on the streets would go into court and describe the transaction alike, therefore, I do not see any question for criticism upon the profession simply because we differ. We are human, and we differ in our opinions even here—there

is no reason why we should not differ in court. The law of France, whereby a court appoints a committee, or a body of medical men, to decide questions of this kind, seems to me a very proper one. In that manner a nearer approach to agreement could unquestionably be obtained, than by being subpenaed on one side or the other, and the attorneys on the opposite side filling the mind of the medical expert with their views of the case beforehand. In such a case, it is scarcely possible for medical men to go into court and agree; hence the necessity of the State providing for a jury—so to speak—of medical experts who shall agree upon questions presented to them, if possible, and where not possible, who shall report their disagreement. Then we could unquestionably get nearer to these matters than we do now. I hope the resolution will pass; I will second it. I hope also, as the time is short, that the committee will report at the next session.

(Motion to refer to Committee on Medical Legislation. Motion seconded.)

THE PRESIDENT: The motion is made that it be referred to the Committee on Legislation.

DR. FORBES: I think that is very proper. I waive my right, together with the mover of the resolution, and ask it to be so referred.

DR. S. S. THORN, of Toledo: I would like to have this committee instructed to do something at the next session of the Legislature.

DR. CARPENTER: I waive my right in the matter; but, would not this matter receive more attention if it was referred to a special committee rather than to the general Legislative Committee? I have waived my right, however, I make that suggestion. It seems to me that if some of the old and substantial members of the society were put upon this committee they would have sufficient influence to bring forth the desired result.

DR. DARBY: There is a little matter in the way of a report of progress in this case that might be of interest to some members of the society, in regard to the appointment of a committee. I would just say that we are through the Coroner's Court and the Common Pleas Court; we are also through the Circuit Court, which dodged the main point at issue and said it was a proper thing upon which the highest tribunal of the State should act. We are now at the door of the Supreme Court with a case which is considered good by some and by others not so good. It is drawn on a very fine line. The question is: Having a knowledge of certain facts upon which we have testified, upon further examination, may we be compelled to go on and testify *as experts?* For instance, having seen a man struck on the head, may the Court, after we have testified to that fact, detain us and make us give testimony as experts? I am at the door of the Supreme Court. I am ready to go in if it is for the best of the cause. I have no personal ambition in the matter, whatever, any further than to do the best thing possible for the profession and the State at large.

In regard to appointing a committee, I would be obliged to the society if they would appoint a committee, to whom I could give the details of this case without taking up your time, and let them recommend, after due consideration, whether we shall proceed or not. So far as we have gone, we have had more than enough money to pay, everything is paid up and guaranteed, and we have quite a little sum to go to the Supreme Court with if we want to do so.

DR. R. H. REED, of Mansfield: Upon the question before us I desire to say a few things. I did not hear Dr. Darby's paper; I was on a committee and could not be present.

As to entering the Supreme Court, I think that is a thing that ought to be carefully considered, either by our

committee on Legislation proper, or by a special committee. We, as physicians all over the State, feel the imposition which has been placed upon us in having to testify without being paid for our expert testimony. Now the question comes up whether Dr. Darby has the right kind of a case to carry to the Supreme Court? As a personal friend of Dr. Darby, I am wholly in accord. I telegraphed him the moment I heard of it, to draw on me for ten dollars. I have learned that there are some points in his case which makes it a question. We don't want to carry a case to the Supreme Court of this State to have it tested, in which there is a shadow of doubt of our getting a fair and square decision of the questions which interest us. From what I learn of this case, I find that the Doctor had acted as assistant to the Coroner, and thus being the court's officer, refused to testify; and whether the Supreme Court will not take it for granted that *in his* case he should have testified, is the practical question. If the case should go against us, it may be years and years before we can get another case before the Court to fairly test these questions. Let us have a committee to look into the true merits of this case and see whether it is advisable for us to go on, or whether we will wait until we get a case that is a typical case and then carry it up. It is too important a question to allow to go on without we are sure we are right. I am wholly in accord with Dr. Darby. He has been arrested in this matter, and I have backed him in everything he has done, but I do not want to go into this case with technicalities which will defeat us, and then wait for years before we can get a reversal of that decision, which might be regarded as decisive of the main point when it is not.

Dr. E. H. Hyatt, of Delaware: I think the question of caution should be well considered in this matter. The Court in Delaware County held that the Court had

the right, when a medical man was called to testify as to a question of fact, to hold that medical man as long as it pleased. That seems to be the difficulty in this very case.

He saw and was called to testify upon questions of facts. The lower courts, so far as I am acquainted with them, hold it to be their right, and they exercise it, to hold a man as long as they see fit. This is the known idea of the lower courts. It seems to me this is not the kind of a case to go before the Supreme Court. If we could eliminate his having had any knowledge of the facts, it would be a proper case for a test; as it is, it is not a proper case for a test. We will only involve ourselves if it should be decided against us in the Supreme Court. I think we had better go slow and not indorse a thing that there is a technical question involved in. If the Court decides against us we will be in a worse position than before.

DR. S. S. THORN, of Toledo: I think every man in this house agrees that we ought to have a committee appointed. I would like to have this committee appointed and these arguments addressed to this committee.

DR. J. W. HAMILTON: It seems to me that we ought to have a little light here. I don't know the facts of the case before us. I don't know what it is that is referred to as constituting the complication. I would like to hear Dr. Darby state the case, so that we can vote intelligently upon the whole matter. I want to ask what were the circumstances of the case in which he was called upon to testify preceding his appearance in Court. Is it simply the naked question of the right of the Court to subpena us as experts and decline to pay us anything but ordinary fees? Or, is there something else connected with it? I would like to know the history and character of it.

DR. S. F. FORBES: While I have no objection to the

information being given, it seems to me that in disposing of this resolution it is out of order to discuss any particular case. The resolution contemplates that the report be submitted to the Committee on Legislation on the question of expert testimony, without any consideration of any particular case. This Society proposes to submit the whole matter of expert testimony to the Legislative Committee for the purpose of getting a statute passed to pay experts their proper fee. We have brought into this matter a case that is being tried. They don't belong to one another at all, it seems to me, at the same time I have no disposition to exclude any information.

(Amendment to resolution withdrawn by Dr. Merriman.)

DR. HAMILTON: I understand that all this discussion is relative to the carrying up of this case to the Supreme Court. If it has complications, I want to know it, in order to know what to think about it.

THE PRESIDENT: The question is really upon the adoption of the resolution and its reference to a committee. We have got a Standing Committee who are elected to serve five years, each of them, and we elected a member the last election. If this matter is going to be continued for any length of time, it is as competent a committee as we can get. It seems to me it is a question of approaching the Legislature upon this subject.

DR. R. H. REED, of Mansfield: That is the very point we want to get at. This Standing Committee is to present something to the Legislature. This question as to whether we will allow this case to go to the Supreme Court, is a special report to be made to this committee, on Dr. Darby's special case, whether or not to go to the Supreme Court. I think it is proper to have a particular committee to investigate this case and direct Dr. Darby what to do.

THE PRESIDENT: The question is, then, on referring this to a special committee to be appointed now.

(Dr. Carpenter's resolution again read before the Society.)

DR. DARBY: Modesty has prevented me from telling the Society of the details of this story. Dr. Hamilton seems to think they ought to know it. My idea is that we are probably in rather a bad fix to go to the Supreme Court. I would be obliged if we could have a special committee appointed, and I will tell them all about it. I think we are in a first-class shape to go before the Legislature. Out in Indiana, when Dr. Buchanan (?) took his case to the Supreme Court, and beat them, the Legislature turned right around and passed a law that *we should* testify! If we beat them in the Supreme Court, the Legislature may do just as they did in Indiana, and pass a law that we should testify; it would be just like them. The Legislature will concede that this thing is mixed up; they may be willing to do something. I doubt if they will, should we go ahead and make a regular fight. I think it would be best to refer my case to a special committee, who can get together and talk about it right now.

DR. HYATT: Before this is put, it seems to me that Dr. Darby's name should come out of that resolution. The plain question to go to the Legislature is one thing and that is another. I move to strike that out and then let it go to the Legislature on the general question of legislation on expert testimony alone.

(Motion put and carried.)

(Motion that the Chair appoint a committee to investigate Dr. Darby's particular case. Seconded—carried.)

The use of Electricity in Dermatology, with a few Practical Suggestions.

BY WILLIAM T. CORLETT, M. D., L. R. C. P. LOND., CLEVELAND.

More than half a century has passed since the classical papers of Faraday were given to the world. More than half a century has passed since the demonstrations of this investigator made accessible to us all, the process of decomposing compound substances by means of electricity.

The Electrolysis of Faraday, for so he called it, has been utilized for the most part by the artisan. It is true its empirical use in medicine has fulfilled, from time to time, certain ill-defined conditions, but its practical application to animal tissues, and the changes therein wrought, have only of late been clearly and systematically studied.

M. Burgoin[1] in his publications established the fundamental law of electrolysis to be the appearance of an acid at the positive and an alkali at the negative pole, while to a painstaking investigator, Ciniselli,[2] we are indebted for the first careful study of the chemical changes which take place in the interpolar circuit. Later Onimus and Blum[3] confirmed the observations of Burgoin. They further demonstrated that when an electric current is applied to muscle, there takes place a decomposition of its salts, in which the oxygen radicals, sulphuric, nitric, phosphoric and hydrochloric acid, pass to the anode, while those pertaining to the hydrogen element, soda, potassa and ammonia, pass to the negative terminal.

Frommhold,[4] observing these molecular changes which take place in electrolysis, discovered another though closely allied physical phenomenon, ELECTRICAL OSMOSIS, or the process of transferring molecules through a porous medium. By some, and by Frommhold himself, this was looked upon, *in modo et forma*, as the true explanation of the electrolytic action. From this it was taught that the mechanical trans-

1 Journ. de Pharm. et de Chemie, 1860-1867.
2 Gazette des Hop., 1860.
3 Bulletin Gen. de Therapeut., Tome lxxxii. Paris.
4 Handbook of Gen. Therapeut. Ziemssen, Vol. ii.

portation of drugs through living animal tissues might be effected. Apparently, however, the osmosis of Frommhold and chemical disintegration by electricity are identical. In both molecular cohesion is overcome by electrical force; and in both molecular affinity is less than the affinity for the respective electrodes.

Again, the immediate and resulting conditions of the tissues after electrolysis have been studied by Ciniselli. The same investigator, in a Memoir to the *Societe de Chirurgie de Paris* (1860), affirmed that the electric current when applied to living animal tissues manifested properties of a threefold nature, which he called physiological, calorific and chemical.

With this brief *resume* of the proximate principles of the electrical force as applied to the living organism, I shall not further trespass on your space; but will offer a few promptures which the application of these principles to dermatological work has suggested.

THE REMOVAL OF SUPERFLUOUS HAIR.

You are familiar, doubtless, with the method of permanent depilation by electrolysis, which is now the established treatment for hypertrichosis. It was introduced by our eminent countryman Dr. Hardaway, of St. Louis, although the conceptions which led to its development belong to Dr. Michel of the same city.

The details of this procedure have been given so frequently and so ably by others that I shall not repeat them here, considering it sufficient to point out certain obstacles one is liable to meet with in their application, as well as to call attention to dangers which unskilled or careless manipulation may entail.

At the outset, some difficulty may be experienced in selecting a suitable battery; first, on account of the variety of manufacture; and, second, because the opinion of authors is so widely at variance respecting the properties of the high and low tension currents for purposes of depilation. It is not my purpose, nor is it within the scope of this paper, to recommend any special instrument; but experience prompts me to advise a battery arranged for volume, with tension only sufficient to overcome the tissue resistance. With a battery of high tension the destruction of tissue surrounding the hair follicle will be more extensive;

the subsequent dermatitis will be more severe; permanent scars are more liable to ensue, and withal there is an element of danger. Recently, a woman consulted me for a keloidal growth on the upper lip, which followed electrolytic epilation with a battery of high tension. A similar growth is brought to mind which followed some of my first experiences with electrolysis.

As to the strength of current to be used, there seems to be a wide range; one writer of recent date gives from one to two milliamperes, another from four to seven. But here the discrepancy is more apparent that real, for batteries arranged for quantity require only half the number of milliamperes as do those arranged for intensity. Experience alone will enable one to determine the amount of resistance in each case, and the consequent strength required. Again, the number of milliamperes will depend upon the amount of work to be done. One milliampere, low tension, will destroy small hairs in fifteen seconds, while large hairs, or those which have been frequently plucked, require three milliamperes from fifteen to thirty seconds. The time required will likewise depend largely on the tension of the current used: a current of high tension, which has the power to overcome resistance, will accomplish a given work in less time than one of low tension and greater quantity; because the latter has less power of overcoming resistance. To employ the strongest current with the least amount of pain and disfigurement should be constantly in mind. In addition to what has already been said on this subject, a valuable means of accomplishing this is by insulating the needle to within two lines of the point, with a coating of shellac, or of rubber dissolved in collodion.[1] In lieu of this the surface of the skin may be saturated with vinegar, thus neutralizing the alkali generated at the negative pole. This I think to be the better procedure. The needle holder should likewise be insulated; if it be not the current is liable to be diffused through the operator's hand. Select a needle which is slender and flexible, terminating in a smooth round point, that it may more readily follow the hair follicle. The large rough needles which are offered are worthless, save in weight as old metal. I have attached a platinum needle

1 For full description see Haynes Elem. Prin. of Electro-Ther. Chicago, 1887.

to the positive pole of a high tension battery a few times with the following result: The time required to loosen the hair was longer; the immediate effect in the tissues adjacent was less marked, but the following day they were painful with a firm nodule at the point of each insertion. The cicatrix which followed was slow to disappear.

The part to be destroyed in epilation by electrolysis is the hair papilla. On the upper lip and chin this may be easily done, but in the submaxillary region the root often pursues a curved or irregularly oblique direction, which makes it difficult to follow; as a consequence the papilla frequently remains intact and the hair returns.

TO PROMOTE THE GROWTH OF THE HAIR.

Equally important with the destruction of the hair is its stimulation to growth.

Without entering into the etiology of the various forms of alopecia, which in the treatment should be taken into account, we have in electricity a promotor of cell growth as well as a power of destruction.

It has been seen that oxygen collects at the anode when the living tissues are inclosed within the external circuit. It is known, too, that oxidation, within physiological limits, is an important factor in growth. In vegetable life electricity increases cellular growth and under its influence the plant towers upward with greater luxuriance. May not the analogy be applied to the hair papilla? In any case it acts as a local irritant, and as such draws on the systemic supply of cell-forming material.

During the past year I have made a series of experiments with the anode of a high tension battery in the treatment of alopecia. The result, which will be given more fully at another time, warrants the following conclusions: Alopecia unaccompanied by inflammatory conditions of the scalp, in which the existing condition is atrophy of the hair bulb, is benefited by electricity. Alopecia areata, not due to inflammation or traumatism, is benefited by the same means. In the former the applications are made with an insulated metallic brush, in the latter by a carbon disk; in both the applications are made bi-weekly from ten to fifteen minutes.

NEVI, FIBROMATA, PAPILLOMATA AND CHLOASMA.

In the first named of these superficial disfigurements, electrolysis is the treatment *par excellence*. After one or two applications nevus pigmentosus shrivels and fades away.

The strength of the current should be regulated by the destructive effect desired: thus, in nevus araneus, five milliamperes is sufficiently strong, while twenty may be called for in nevus telangiectasis.

In a case of molluscum fibrosum, treated by electrolysis, only a few small tumors, little larger than a pea, were satisfactorily removed. But again, in pipillary growths of the skin we have, in electrolysis, a safe and efficient mode of treatment.

In the derangement of pigmentation known as chloasma, the bi-weekly use of a low tension current of one milliampere, has caused the discoloration to disappear. In one case the disease returned at the end of four months, the treatment was resumed and the discoloration is again disappearing. One other case of eight months ago remains well. No cause could be assigned for the chloasma in these cases.

In the treatment of the nevi and papillomata, we desire a wide area of destruction; for this purpose a needle connected with a current of high tension should be thrust into the growth at different points. Derangements of pigmentation require the electrolytic effect with as little inflammation as possible; consequently, a current of low tension is used with the negative terminal, and the needle is replaced by a carbon disk.

These applications of electricity to dermatology, most of which are established, are not given as a complete list, but refer only to such as have been confirmed by personal experience.

There is another group of cutaneous affections, already large and increasing in number, and especially prevalent in this country, in which electricity in its various forms of application seems full of promise. I refer to the NUROSES CUTANEÆ, of which I had the honor of speaking before this society two years ago. But here it must be admitted uncertainties exist; and the uncertainty as to the value of electritity in neuro-therapeutics, in some, gives rise

to apathetic disbelief. That an element of doubt is condusive to the most healthful advancement, we admit; neither should we accept the vague dogmas of the therapeutical optimist; but on this account we should not be less active nor keenly alive to advancement.

THE RELATION OF THE PHYSICIAN TO SANITATION.

BY T. CLARKE MILLER, M. D., MASSILLON.

Many of us, though still young, have witnessed a marvelous development of a most important feature of the many-sided science of health. We have studied with a view to make ourselves proficient in the treatment of disease in its multifarious forms. We have almost fallen into the habit of speaking of our occupation as the "healing art." Volumes and libraries have for years flowed from steam printing presses, devoted to the description and treatment of disease. A science of etiology has comparatively recently grown up, which, with its growth, has opened up a vast domain, hitherto almost entirely neglected, and which even now does not command the universal attention of our profession as it should; the preservation of health and the prevention of disease, personal hygiene and public sanitation, tersely expressed by the term, *sanitary science.*

The study of disease and the oft-recurring failures in its treatment, have stimulated thinking men to inquiry as to the surroundings of the sick, climatic influences, the quality of the air, water and food, and from that to the external conditions of health. It is every day becoming more and more a question, with our most thoughtful men, how we may *prevent* disease—how we may remove or mitigate the perils that environ health. How brief and spiritless now-a-days are the discussions on the treatment of small-pox? How unimportant and stale has the mere therapeutics of this disease become? We have almost forgotten the numberless graves this dire disease used to fill, as well as the scarred and seamed faces of the multitudes on whom it placed its hideous mark. Since Jenner, starting with a fragile thread of unlearned tradition, spun his theory of the protective power of vaccination, then demonstrated the correctness of that theory, in spite of the averted faces of his professional brethern, small-pox has almost ceased to be a subject of interest to us. But who can estimate the

extent to which the world has been enriched by the economy of young and vigorous life, resulting from this discovery. Yet preventive medicine, so auspiciously born, was dandled and fondled by its admiring, conservative, shall I say fossilized, nurse until its skin was shrunken and wrinkled by age (or at least must have been, had it been a real, rather than a supposed baby). The medical profession, for a long series of years after Jenner's discovery, acted with contentment and satisfaction as a nurse (a "dry nurse") to preventive medicine. The old dame, however, was finally awakened from her senile lethargy by the startling and revolutionary announcement, that many of the most destructive and intractable diseases are preventable. Her glassy eyes took on an expression of interest and speculation, her pulse quickened, color came to her cheek, the wrinkles which marred her wholesome countenance disappeared, her shrunken muscles swelled to harmonious fullness, and the milk of human kindness tingled anew in her swelling breasts. She took this long neglected child, preventive medicine, to her bosom, and, having consulted her old Greek authorities, was reminded that Hygeia was the daughter of Esculapius, and boldly and emphatically reasserted the close relationship of prevention to cure.

Why should not you, the followers of the father, to-day, claim also the right to be considered the chief patrons of the daughter? Yet there are those who are ambitious to share this primacy with you, or even take it from you. The medical profession cannot afford to belittle, and is not disposed to ignore, the growing army of sanitarians in special lines; on the contrary, we cannot but rejoice at the growth of interest among architects, in the sanitary bearings of their work. The time is coming, if it is not already here, when the warming and ventilation and the proper drainage of a house, or a public building, will receive more attention by architects, though the harmony and proportions of the exterior may not claim less, and the artist who aims at beauty as an end will not be so highly esteemed in his profession as the man who always keeps the question of healthfulness before his mind. The great architect will be the one who attains both without sacrificing either. The ideal of the truly great architect must combine these elements in their order—*healthfulness*, *utility*

and *beauty*. Increasing attention is being paid to plumbing, and the time is drawing near when a reputable plumber almost anywhere may be trusted to do safe work, and the death traps formerly so common a feature of a great deal of the plumbing work, will disappear with the men who made them, because they knew no better.

The proper ventilation of houses and public buildings is being more and more taken into consideration by the people; in fact, the people are interesting themselves in questions of personal hygiene, in all their bearings, to an extent never before known, and are crowding upon the heels of their leaders with appetites rendered only the more keen by the crumbs of sanitary knowledge which they receive.

The day is close at hand when *security of human life will be recognized for what it is—the real basis of all values.*

Education and leadership is all that is needed, and there must be a low moral tone in the community, which, having learned the *effectiveness* of sanitation in the prevention of disease and in the prolongation of life, refuses to use the means requisite to put and keep its surroundings in good, wholesome condition.

The plumbers have been making very commendable progress in the past few years. There are many of them who can be trusted to do safe work in their line, but some of them by reason of having learned their trade well, have come to consider themselves commanders in the sanitary army, and "to assume that the whole burden of practical sanitation rests upon their own shoulders, and felicitate themselves that doctors and achitects have heartily joined with *them*, who have always done and are still doing everything that is necessary to do about the relations of plumbing to health. Physicians who have kept themselves abreast with the advance of knowledge of the etiology of disease, and have been foremost in the detection of bad plumbing by a knowledge of its results, are not only unnecessary, but meddlesome—they know how to *cure* disease, nothing about how to *prevent* it. Chemists and engineers stand in the same relation, and all must now stand off." (*Sanitarian* for April, 1887.)

Indeed we are in danger of having an army of trades, seeking to place themselves in the sanitary priest-hood.

The butcher who knows wholesome meat and furnishes it to his customers is likely to become the "sanitary butcher;" the honest and well-qualified grocer, the "sanitary grocer;" and the interminable procession takes up its line of march—the "sanitary tailor," the "sanitary shoemaker," the "sanitary cook," and the sanitary what-not, all claiming to be *priests* rather than *worshippers*, at the altars of Hygeia.

I recently heard an aged and deservedly honored school superintendent almost devoutly congratulate a sanitary convention on the newly discovered fact that the "doctors are *beginning* to take an interest in sanitary matters." So you see that physicians are not so universally recognized as the leaders, ex-officio, in sanitary reform, as might be supposed. You will no doubt be slow to abandon your rightful and traditional claim to leadership, yet it is conceivable that abdication may become necessary in order to avoid deposition. It will be a veritable day of wrath for our profession when the weighing process which is going on, more and more diligently every day, shall have demonstrated our unfitness to lead and instruct the people in matters of personal hygiene and public sanitation. But are the young men who are entering the profession as well equipped as sanitarians as they ought to be? Can you, on the spur of the moment, bring to mind the medical college which is doing its duty towards its students and the people in this regard? What college has a real chair of Hygiene and Sanitary Science? Is this immensely important subject given an honorable place in the faculty? a place even as prominent in the work of the session and in the examinations as it occupies in the announcement? It may be said that all the chairs teach it—so all the chairs teach anatomy, yet who would consent to place anatomy on a one-legged stool, a chair which cannot stand without the incidental support of the other chairs?

The hour has struck when the times are likely to outrun the physician who is not well informed in questions pertaining to practical sanitation. The medical profession of Ohio can ill afford to concede to a handful of men of voluble mouths and ever-flowing fountain pens, the modest claim they constantly put forward, in season and out of season, in execrable English, that they are the men, *par excellence*, and the only men in the State, who are at all

entitled to the name of sanitarians. If the medical colleges do not measure up to the occasion, and the physicians are found wanting, the people will have leaders from other sources.

The physician who has a rustic reputation for being "good in fevers," must, at least, *share* his glory with the one who can and will search out and designate the causes, and demonstrate the possibility of prevention. The physician who can uncover the hidden danger which threatens the whole family, or community, must come more and more, in the opinion of the people, to dispute the supremacy with the one who skilfully conducts the sick one to health or to death. You have taught your intelligent patron that many diseases are self-limited in their nature—that you do not treat diseases by name so much as by careful study of the conditions in each individual case—that specifics are not numerous and are not increasing rapidly in number. He is now asking you to advise him as to the location of his well, the ventilation of his house and the safety of his sewer connections and house fixtures. Will he listen with satisfaction to a discourse, however learned, on the constituents of respirable air, and the benefits to be derived from breathing such air, and the results likely, or sure, to follow the breathing of foul air? No, he will expect you to tell him how to solve the problem of securing air which shall be safely pure as well as comfortably warm, when the thermometer indicates several degrees below zero. Does your present knowledge qualify you to lead him out of his difficulties, or into worse dangers than those he at present realizes? His plumber, strange as it may seem, will often fail him as a sanitary adviser; you must know how much dependence is to be placed in a trap, how the house system of pipes is to be ventilated, where vents are to be placed, all to the one end in which he is interested—getting rid of the sewage of his house with safety to himself and family. So long as we invite the blind to trust themselves to our leadership, can we be innocent and neglect to constantly and earnestly cultivate our own sense of vision?

The problem of saving the eyes of the children in our schools waits urgently and eagerly for practical solution. The parent listens intently while you explain the form of the myopic eye and the optical reason why it is myopic,

but his heart sinks when you tell him it is incurable. He knows you can adapt glasses to most optical defects, he wants the eyes *saved*, not supplemented by machinery. Here is a loud and importunate demand for prevention. This question has been studied for many years, in this country and in Europe, by able and enthusiastic men; the results of very elaborate investigation and research have been placed on record; the solution of the important problem is, no doubt, well advanced; but as yet the development of defects of vision, during school years, remains a very grave and stubborn fact, which is variously explained. The very variety of explanations, indeed, serves to show that speculation still constitutes a large element in the literature of the subject.

This leads to the question whether physicians ought not, in some respects, to place themselves in more immediate contact with the people politically. I would not suggest that we become politicians, but ought we not to interest ourselves, specially, for instance, in the composition of boards of education? There is not a board of education in Ohio to-day that would not be the better by having a physician in it; a man interested, intelligently, in the physical welfare of the children; one who appreciates the necessity of fresh air, and abundant and proper light; who knows the difference between work and overwork, and can measure the effect, on physical development, of all unsanitary surroundings and dangerous methods in the schools.

The people are filled with the idea that schools are maintained purely for the cultivation of the mind, or rather for the purpose of instilling, or injecting, or impounding a certain amount of knowledge; and their representatives on school boards are too often men who believe that the climax of success in the management of the schools is reached at exactly the same moment as the minimum cost per capita per annum. Inferior teachers are preferred because they cost less; well known principles of construction are ignored for economical reasons; ventilation is neglected because fuel is an important element in securing it, and coal costs money. The sacrifice of health cannot appear in an annual report, it is consequently of no importance; blood is cheaper than coal.

The people need to be constantly reminded that a well

stored, or even a cultivated mind, is of little value in a puny, dying body; and on the other hand, that a good physical organization will find its place and make its way in the world if it only knows enough to come to its meals. They should be taught that the aim of education is to lead out and develop the moral and physical powers as well as the mental faculties.

We want men and women of symmetrical proportions in every sense, who may be looked at with satisfaction from all sides—not specimens with a grand brown stone front, and a tumble down clapboard kitchen in the rear.

Physicians should make themselves felt in school boards whether they are members or not. The welfare of the coming men and women, who are to manage the affairs of our country, is largely in their hands.

There are many towns and cities of considerable importance, in our own State, which have no boards of health. To be sure, there is not likely to be any great amount of pecuniary advantage growing out of an attempt to have some orderly and systematic effort made in a sanitary direction; yet it is a question whether physicians can afford to admit that their calling is altogether mercenary and not in any degree benevolent, and it is not very easy to discover the hiding place of beneficence, in even honestly and skillfully treating diseases which we *could have prevented*. In many cases where boards of health exist, the health officer is some incapable who has nothing else to do, or is not qualified for any other kind of work, and much less for this. Physicians abdicate their claims as leaders in sanitary matters by declining to serve on boards of health, or as health officers. Do not the people look, in vain, in such cases for leadership, to the men who ought to be their leaders? The consequence is, that in the presence of pestilence the physician is often unqualified to give safe advice and must either, with shame, acknowledge the truth or essay, in his conscious or unconscious ignorance, to lead the people who trust him. While all physicians are, or ought to be, *theoretical* sanitarians, would it not be wise for them to seize every opportunity to make themselves *practical* sanitarians?

When the people are satisfied that we have valuable advice to give, as to the preservation of health or the prevention of disease, they will be willing to pay for our

services—at least as willing as they now are when they are sick. Our relations with the people will become more happy, when we can meet, professionally, under more favorable circumstances than usually surround the bedside of the sick and dying.

Many years ago a prominent physician in an Ohio town, which has since grown to be quite a pretentious city, was asked to contribute to a fund for filling a vile pond or swamp in the center of the place. He answered that he "would not give one cent, as every house around had among its inmates more or less sickness, due to that swamp, and it would not do to diminish the medical revenues." Probably few of you have heard the senile and decrepit joke which some people, who are not otherwise fools, delight to inflict on physicians by inquiring whether, or not, it is "distressingly healthy"—the implication being that your happiness approaches exultation exactly in proportion as the calamities and afflictions of the people increase.

If the physician who treated the first case of typhoid fever at Plymouth, Pa., had secured the destruction or thorough disinfection of the dejections from that case, there would have been a tremendous deficit in the "professional revenues." To be sure, the people would not have known the terrible calamity which was averted, and would not even have recognized his humane and intelligent skill; but when a man comes to settle with himself, where would he prefer to be, with the one who indifferently or ignorantly allowed the seeds of that scourge to be sown under his eyes, or with the one who, unseen and single-handed, throttled the monster at its birth and saved the people? That epidemic cost $67,000 direct. The loss of earnings reached over $30,000; but how shall we measure the distress incident to 1200 cases of sickness in a population of 8000, and the loss to families and the state growing out of 114 deaths? The State Board of Health of Pennsylvania, or Ohio either, would have furnished, to any one, all the information necessary to have prevented that epidemic without expense beyond the cost of a postal card. Plymouth saved that cent and poured out $100,000. Sanitation is comparatively cheap.

The time will soon come when the people will take their chances with the ordinary trifling ailments, which constitute

more than half the physician's work, rather than call in a physician who is in attendance on any of the contagious, preventable diseases. Then those who *need it* will be furnished with a pecuniary stimulus to drive these enemies of the human race outside the boundaries of civilization.

What are the Laws of Ohio Regulating the Practice of Medicine and Surgery? and what is Needed to Protect people of the State from Impostors?

BY W. W. JONES, M. D., TOLEDO.

The subject of regulating the practice of medicine in Ohio by law, has agitated the profession ever since the organization of this society, now forty years, and notwithstanding attempts have been continually made to have them conform to an enlightened view for the protection of the people against the evils of charlatanry, they are yet far short of shutting off the serious evils under which communities groan and die through the so-called liberty of pretenders and quacks to trifle with human life. This statement will be confirmed by the observation and experience of every physician in the State, and the evil has become worse of late years instead of better, on account of protection laws enacted by other states, which have driven these frauds from their borders to find other fields in which to impose upon a credulous public.

Let us review these laws and see what they are. They will be found in Section 4,403 and its supplement, and Section 6,992 of the Revised Statutes, and are as follows:

SECTION 4403. "No person who is not a graduate of a reputable school of medicine either in the United States or a foreign country, or who can not produce a certificate of qualification from a state or county medical society, and is not a person of good moral character, shall practice or attempt to practice medicine in any of its departments, or prescribe medicine for reward or compensation, for any person within this State, except that when a person has been continuously engaged in the practice of medicine for a period of ten years or more, he shall be considered to have complied with the provisions of this chapter, and when a person has been in continuous practice of medicine for five years or more, he shall be allowed two years in which to comply therewith. Provided, however, that any person who

shall have graduated at any school of medicine in any state or foreign country in which any condition or restriction is imposed by the laws thereof upon the practice of medicine by the graduates of medical schools in Ohio, shall be subject to the same restrictions or conditions in the practice of medicine in this State as are imposed upon such graduates of medical schools of Ohio by the laws of such state or foreign country, and a person violating this section shall not be entitled to any compensation for services rendered." (O. S., vol. 82, page 218.)

SEC. 6,992. "Whoever prescribes or practices or attempts to practice medicine in any of its departments, or performs or attempts to perform a surgical operation, without having attended two full courses of instruction and graduated at a school of medicine, either in this or a foreign country, or who can not produce a certificate of qualification from a state or county medical society, except that when a person has been continuously engaged in the practice of medicine for a period of ten years, or more, he shall be considered to have complied with the provisions of this chapter; and when a person has been in continuous practice of medicine for five years or more, he shall be allowed two years in which to comply therewith; shall, for the first offence, be fined not more than one hundred nor less than fifty dollars, and for any subsequent offence be imprisoned for the term of thirty days." (O. S. 78, page 183.)

SUPPLEMENTARY SEC. 4403a. "Whoever shall make, issue or publish for purpose of sale, barter or gift, any certificate, diploma, or other writing or document, falsely representing the holder or receiver thereof to be a graduate of any medical school or college, or of any educational institution of medicine whatsoever, and entitled to the powers, privileges, or degrees thereby pretended to be conferred; or whoever shall sell or otherwise dispose of, or offer to do so, any such diploma, certificate, writing or document containing the false representation aforesaid; or, whoever shall use his name, or permit the same to be used as a subscriber, for any purpose or in any capacity to such false and fictitious diploma, certificate, writing or document aforesaid, or whoever shall engage in the practice of medicine and surgery under and by virtue of such fraudulent diploma, certificate, writing or document aforesaid, upon conviction

thereof, shall be subject to the penalty prescribed in section four thousand four hundred and three b."

SEC. 4403b. "Whoever shall make, issue or publish, or cause to be made, issued, or published for the purpose of sale, barter or gift, any diploma, certificate or writing representing the holder thereof to be a graduate of any medical school or college, or of any educational institution of medicine whatsoever, unless such holder shall have, in fact, attended a complete course of instruction in such school, college or institution for medical teaching, which course shall be equal to the average course of instruction in other schools, colleges or institutions where the various branches of medicine are taught as a science, in good standing in the State of Ohio, upon conviction thereof, shall be fined in any sum not exceeding one thousand dollars, nor less than one hundred dollars, or imprisoned in the penitentiary not more than three years, nor less than one year, or both, at the discretion of the court."

In a paper read by invitation before the Cincinnati Academy of Medicine, by R. de V. Carroll, attorney at law, and published in the *Lancet and Clinic* of that city in February, 1887, this author, after quoting these statutes, says: "This comprises about all the Ohio laws on these subjects; but it seems to me if it were faithfully carried up, the path of the medical fraud might be made one of thorns."

"There is no great expense connected with the punishment of offenders against these laws. All that is required is that a warrant be sworn out and that some one prosecute the case as a witness. The employment of an attorney is not necessary, as there is both a city and a county prosecutor, whose duty it is to attend to these matters in their respective courts, viz: the Common Pleas and Police Court."

The writer quoted, although a lawyer, does not seem to appreciate that these statutes are penal (misdemeanors and felonies), that when a criminal is brought before a court and pleads "not guilty," the State is compelled to prove its case or the prisoner must be acquitted. The prisoner cannot be compelled to admit that he has no diploma or other claims to practice medicine, and neither the prosecuting witness nor any one else, can swear that the defendant has none.

I know of but one instance in which the penalties for practicing medicine in the State without these qualifications resulted in conviction, and this was an aggravated one which involved the death of the patient, where the defendant admitted in court that he had no medical credentials, and the court fined him fifty dollars and costs.

These statutes have evidently been drawn up by doctors unacquainted with the rules of law for their enforcement, and in consequence have failed to protect communities which have been outraged by medical frauds and pretenders. They are sufficient in themselves if this could be done to rid the State of a vast horde of leeches who are daily sucking the life blood of our people, upon which they fatten and are sustained.

This brings up the last paragraph in the title of this paper, viz: "What additions are needed to protect the people of the state from impostors?" The answer is clear and plain. A physician's registry law, by which we may know who is of us and who is not, will complete the links in the now broken chain through which all manner of swindling devices are practiced.

At the session of the Ohio legislature in 1885, I drew up and had presented in the senate, Bill No. 389 as a further supplement (*c*) to section 4403, which, together with an explanatory letter to the senator presenting it, is hereby copied:

Sixty-sixth General Assembly, adjourned session—S. B. No. 389.

Mr. McLyman—Introduced in the senate of Ohio, February, 1885, and referred to committee, but never reported:

A bill supplementary to an act supplementary to section four thousand four hundred and three of the revised statutes of Ohio, passed February 15, 1881 (Ohio Laws, volume 78, pages 27 and 28).

Section 1. *Be it enacted by the General Assembly of the State of Ohio,* That the following section be enacted as supplementary to sections four thousand four hundred and three, *a* and *b*, of the revised statutes of Ohio, passed February 15, 1881:

Section 4403*c*. It shall be unlawful for any person to practice medicine or surgery in this State, without first recording his diploma or certificate upon which he claims

to be entitled to practice medicine or surgery, in the office of the recorder of the county where he resides, and where such person practices upon or by public notice or advertisements in other counties than the one in which he resides, he shall record the same in each county in which he may so practice or advertise. And it shall be the duty of the county commissioners to provide the recorder with the necessary books for recording such diplomas or certificates, and such recorder shall be entitled to such fees for recording the same as may be charged for recording deeds, to be paid by the person applying for the record to practice medicine and surgery, provided, that this section shall not apply to physicians and surgeons who may be called from other counties or states for consultation upon the sick, where there is no attempt to advertise for practice or business. Any person attempting to practice medicine or surgery, for pay or reward, without having complied with the provisions of this section, shall, for the first offense, be fined not more than one hundred nor less than fifty dollars, and for any continuous or subsequent offense, shall be imprisoned in the workhouse or county jail not less than thirty days nor more than six months, and fined not less than one hundred dollars.

Sec. 2. This act to take effect ninety days after its passage.

HON. W. H. MCLYMAN, Ohio Senate:

Dear Sir:—I enclose you bill relating to the practice of medicine, requiring all physicians to record their diplomas, or other evidence upon which they base their claims to practice medicine. The previous section, as you will see (to which this is a supplement), cannot be enforced because the quack will not and cannot be compelled to show his qualifications in a court of justice when arraigned, and the prosecution cannot prove that he has *not* good and true credentials. We are so overrun by pretenders and quacks (who are driven out of other states by their laws), that our people are imposed upon, and, in many instances, either murdered or brought near death by their incompetency. It is time some protection was afforded by law to the people, the poorest and most ignorant of whom are the most liable to be imposed upon.

Numberless instances have occurred in this city, and in all parts of the State, to prove and illustrate this fact, and there is no subject involving the life and health of our people that appeals more strongly or justly to the consideration of our legislators than the one of protection against this kind of imposture, which degrades our civilization, and affects the health and life of innocent men, women and children.

The passage of this supplement will enable communities to weed out, to a considerable extent, a dangerous nuisance, and I feel confident that every *good* physician will be glad to put on record the evidence of his qualifications which might otherwise be lost.

Very sincerely,

W. W. JONES.

Toledo, O., February, 1885.

It should be made the duty of the health officer and sanitary police in cities and towns, where such an organization exists, to enforce the provisions of this section.

Objections on the part of physicians to a registry law ought not to weigh against the general good to be accomplished, and will in no wise interfere with a future law for examining boards which has been advocated for some years past.

When one comes to be assured of prejudices to be overcome, and time and labor necessary to convince a constitutional number of the members of the General Assembly to pass laws of this kind, as many of you are familiar by experience, you will appreciate the importance of making a united effort in order to succeed in getting what is needed to protect the people of the State against impostors. Let each member of this society be constituted a committee of one to bring before his member or members of the legislature, when a candidate for that office, this reasonable request, and obtain from him a pledge before election to vote for its passage, and the result will not be doubtful or its accomplishment laborious.

Notes on a Year's Work in Abdominal Surgery.

BY W. D. HAMILTON, M. D., COLUMBUS.

An effort will be made to give a statement of the cases that have come under observation during the past year.

In the main, Mr. Tait's dictum in regard to the propriety of exploration has been followed; *i. e.*, "That in every case of disease in the abdomen or pelvis, in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made."

It would appear that an exploration is offered as the means of removing all doubt. The fact, however, confronts one that upon opening the abdomen, things are not always so clear as our text-books lead us to suppose.

In a large percentage of cases, if one can make out that there is a lump in the belly, which probably imperils the life or health of a patient, that is about all that can be learned as bearing upon exploration.

In many cases there is not even a lump to guide the enquirer. It is not only, then, the mechanical difficulties that arise in an undertaking of the kind that render this class of operations so formidable; but the uncertainties that beset the diagnosis after the abdomen is opened, are frequently quite appalling.

Case I. Mrs. J. S., Pancoastburg, Fayette Co., O., patient of Dr. Gaskill, aged 56, eight children. No menstrual irregularities, and no history of malignancy in family. Tumor first seen two years previously. Great loss of flesh, and pain had become severe. Exploration June 9th, '86. A very vascular, solid, non-adherent uterine tumor was exposed. Diagnosis, malignancy. Closed wound, and the patient went home on the 13th day. Was relieved of pain for months. She felt so well that her physician had great difficulty in convincing her that the tumor had not been removed. Her old symptoms have recurred, and the mass is growing rapidly.

Case II. Mrs. L. F., Wellsville, Columbiana Co., O., aged 43. Four children, youngest fourteen years old.

No miscarriages, no lacerations. Had been an invalid four years, and had been bedridden during the greater part of the time. Her average weight in health had been 119 lbs; her weight at the time was 85 lbs. Locomotion imperfect. Menorrhagia and metrorrhagia had been persistent. Little or no local pain. Urine normal. An exploratory use of the uterine curette gave negative results. By exclusion the blame of her disability was put upon the generative apparatus. Examination of the appendages elicited neuralgic pain in the neck and back of the head, upon pressure. It was determined to bring about the climacteric by operation. Operation June 29th, '86. The appendages were removed through a cut one and three-fourth inches long. Prompt recovery. A recent letter states that her gain in flesh is 17 lbs., and that she is stronger than for several years.

Case III. Miss ——, patient of Dr. Lisle, Jefferson Co., O., aged 29. Began to menstruate at 14. No pain the first three years. At a certain period she suffered intensely during the subsidence of a vaginitis. For twelve years following, both menstrual and intermenstrual suffering occurred. In the three years prior to the operation it had never ceased, and she had been confined to bed much of the time, and had contracted the opium habit. During nineteen months there had been amenorrhea. Pain recurred, however, especially at what would have been the catamenia. An abscess formed in the left groin, which, three months after its appearance, discharged through the vagina. Operation June 29th, '86. Appendages removed through incision one and three-fourth inches long. Fundus bound back in cul-de sac by adhesions. Great difficulty in freeing the adherent tubes and ovaries. Tubes enlarged, tortuous, and evidently the seat of salpingitis. Recovery prompt. In a few months had gained 20 lbs., was free from pain, and using no opium.

Case IV. Mrs. M. S., Oxford, O., patient of Dr. Todd, of Wooster, had a carcinomatous breast and an ovarian cyst. Amputated breast June 17th. On July 13th, removed a simple, non-adherent, ovarian cyst weighing 15 lbs., through an incision two and five-eighths inches in length. Recovery was rapid, and the patient is now in perfect health.

Case V. Mrs. W. J., Madison, Dakota, aged 35. One child and no miscarriages. Three years prior to operation, the patient had an attack of vaginitis, with irregular menstruation for two and one-half years, and several severe hemorrhages. Had been confined to bed for months prior to the operation. The uterus was perfectly firm in the vagina; the cervix directed backward and the fundus forward. A lump as large as a man's fist appeared in the left groin, pressure upon which caused matter to ooze from the cervix. Operation July 13th. The left tube, enormously distended, was adherent to the posterior surface of the uterus, to the broad ligament, and in fact to everything within reach. An attempt was made to peel it out of its adhesions. When this was well-nigh completed, bleeding having been quite profuse in the meantime, the tube was ruptured, and foul pus escaped into the peritoneal cavity. It had a peculiarly pungent odor. The duration of the operation was one and three-fourth hours. The tube and ovary of the other side being apparently healthy, were not disturbed. The cavity having been thoroughly irrigated, a drain was left in for a few days. The temperature was normal from the start. Her convalescence extended through several months, but she is now in good health. One very interesting fact in the case was the apparent absence of severe pain.

Case VI. Miss J. T., Jefferson Co., O., patient of Dr. J. Presly Lisle; aged 18, and below the average in intelligence. Menstruation had been irregular, and very painful from the time it began, in her fourteenth year. Eight months prior to the operation the patient had sustained two severe falls, and to quote her own language, "She felt something give," and severe pain followed. A sharp attack of peritonitis occurred, which confined her to bed for three months. An abscess formed in one groin, and discharged through the vagina. The pain was continual, and increased during convalescence. She suffered constantly; her form was bent so as to relax the abdominal muscles, thereby diminishing the pressure upon the pelvic contents. On July 20th, the appendages were removed through a short incision. They were small and imperfectly developed; the tubes were rolled up, and adherent to the broad ligaments in such a way as to drag the fundus back-

ward. She was discharged entirely free from pain, her form being upright, and locomotion perfect.

Case VII. Miss ——, Franklin Co., O., aged 38. Menstruation began at 15, always somewhat irregular, and accompanied with pain, which at first lasted about one day; but as she grew older its duration increased to four or five days, during the flow. Had recurrent attacks of pelvic peritonitis, following a fall which she sustained seven years prior to operation. During this time she was seldom free from pain in the left loin, small of the back, hips, groins, ankles and eyeballs. There was intolerance of light, inability to lie comfortably on the back, and a feeling of soreness in the groins that interfered with locomotion. Everything in the way of medication had been tried in vain for her relief, and uterine dilatation accomplished nothing. She went from bad to worse, and said that she would rather die than be unwell again. The appendages were removed July 23d. The tubes were thickened and infiltrated from recurrent attacks of salpingitis, and so friable that the ligature ordinarily applied, cut them in two. Recovery prompt. She is greatly improved, and time only is needed to accomplish a perfect cure.

Case VIII. Mrs. W. F. C., patient of Dr. Coyle, Crawford Co., O., aged 38. No children; menstrual irregularities for six years, and several severe hemorrhages within the previous three years. Examination showed an intra-uterine fibroid, too large to be delivered through the natural passages. Removed appendages August 20th. Hemorrhages have ceased, her health is good. As to whether the tumor has diminished in size, the writer is unable to state.

Case IX. Mrs. C. O., Holmes Co., O., patient of Dr. Wise, aged 51. No children and no miscarriages. Menstrual irregularities for eighteen years. Amenorrhea had existed at intervals for months, and several hemorrhages had occurred. Incessant pain had made her a confirmed invalid. Operation August 26th. The tubes enormously distended, seemed universally adherent to uterus, intestines and broad ligaments. Peeled them out of their adhesions; ruptured them in spite of great care used in handling, and failed to get them away. They were full of dark, bloody, foul fluid, the condition known

as hemato-salpinx. The hemorrhage into the cavity from torn adhesions was very great, and a drain was left in for some days. For several weeks she got great relief. Dr. Wise, her physician, recently told the writer that she is now suffering as much as ever.

It was impossible to distinguish the ruptured and thickened tubes from intestine, and the work of freeing them from adhesions was effectually balked by the collapse of the tubes after the escape of their contents. Blood obscured the field continually.

Case X. Mrs. M. M., Magnetic Springs, O., patient of Dr. Skidmore. Tumor two years in growing. Patient measured 44 inches around the umbilicus. Operation Aug. 27th. Removed a multilocular cyst weighing 50 pounds, with extensive parietal adhesions. Length of wound, 5 inches. The patient is now in perfect health, and has gained 40 pounds.

Case XI. Mrs. C., Leesville, Crawford County, Ohio; aged 44. A tumor had been developing in the abdomen for six years, with loss of flesh and no pain. Operation September 10th. Removed a cyst of the broad ligaments, weighing 30 pounds, and including the appendages. The tubes were solid, an inch in diameter, their lumen being closed. During convalescence an abscess developed between the omentum and abdominal walls, and in close relation with the pedicle. This was opened and irrigated, whereupon she convalesced, became free from fever, and was well enough to walk about the hospital. Eight weeks after operation, she was seized with a hard chill. Septicemia developed about the sixtieth day. Ether was given, the belly was re-opened, and the abdominal contents were found matted together in an adherent mass. Pockets or sinuses led from the stump in all directions. Free irrigation was employed; counter openings were made in the groins, drains were left in, and some improvement of symptoms resulted. She died in nine days after the second operation, or about the sixty-ninth day.

It was suspected that pus had formed in the uterus, having been conveyed from the tubal stump. An unsuccessful effort was made before death to induce it to pass out through the cervix. An autopsy confirmed the suspicion, *i. e.*, the uterus was found distended with pus. It has

always been a source of regret that no drain was employed after the primary operation.

Case XII. Miss B. C., South Bend, Indiana, aged 44; menses normal. Tumor had been known to exist for three years. Operation September 13th. A few pounds of fluid were drawn off through a canula, enucleation was then resorted to, and was accomplished in fifty-five minutes. The solid residue weighed 25 pounds after removal, and proved to be a retro-peritoneal edematous myoma. Death from shock in two and one-half hours.

Case XIII. Miss ——, Franklin County, Ohio, aged 41. Had always had dysmenorrhea, and for several years there had been inter-menstrual pain. For four years she had persistent nausea, particularly during the menstrual week, epigastric tenderness, pain in the back, loins, groins, hips, calves and eyeballs. Has not seen a well day for ten years. Uterus normal; excessive tenderness in the appendages, and a feeling of weight in the pelvis, especially when on the feet. It was thought best to bring about the climacteric by operation, which was done September 17th. Complete relief of symptoms, articles of food that had not been borne for years, taken with relish, and her health is now good. In this case everything in the way of medication had failed.

Case XIV. Mrs. S. A. W., Crawford County, Ohio; aged 47. Suspected uterine myoma. Exploration October 16th. Right ovary easily isolated, but the left one could not be found. Wound closed and improvement of symptoms followed.

Case XV. Mrs. —— Madison County, Ohio, patient of Dr. Strain. Married three years; no children and no miscarriages. Had a vaginitis, with yellow discharge, and scalding pain in urinating. For a year and a half following, menstruation was irregular and painful. For nine months it was accompanied with greenish-yellow pus, and lameness also supervened so that she had to walk with a cane. Six months prior to the operation she had a convulsion, which recurred with increased violence at each subsequent period. Suffered pain continually, and began to have convulsions before menstruation. December 10th, removed the appendages; the tubes evidently being the seat of salpingitis. Is now in perfect health; all convul-

sions, pain and vaginal discharge have ceased, and locomotion is perfect.

Case XVI. Mrs. W. F., Franklin County, Ohio. Exploration made in case of rapidly growing uterine tumor. The attachments of the mass to the bladder were such that it was not deemed wise to resort to hysterectomy. Closed the wound. Recovery.

Case XVII. Mrs. W. R., Hartford City, West Va., patient of Dr. Willson, of Pomeroy, O.; aged 33. Had three children. In December, '86, she miscarried at the third month, and had suppurative peritonitis following. A fluctuating tumor appeared in the abdomen which was tapped twice by Dr. Willson, and two and a half gallons of pus were withdrawn. This was followed by hectic. Laparotomy April 28th, '87, when six quarts of pus, and broken down clots were discharged. The pus-cavity lay between the abdominal walls in front and an agglutinated mass of omentum and intestines behind. The cul-de-sac was well nigh obliterated, and toward the left loin the omentum was adherent to the abdominal walls in such a way as to form a diverticulum for the retention of fluids. A large sound was carried to the bottom of this cavity, and a free counter-opening was made. Drains were left in, both at the median line and loin, and free irrigation was employed. Recovery.

Case XIX. Mrs. W., South Charleston, O., aged 35. Tumor of one and a half year's duration. Laparotomy May 23d, vascular, malignant cyst weighing seventeen pounds. Very extensive omental and intestinal adhesions. About twenty-five ligatures were left in the belly. Recovery. In this case there had been a continual discharge of bloody serum through the vagina for a year.

Case XX. Miss H. B., Three Oaks, Michigan, patient of Dr. Steifel, of Galion, Ohio. Three years ago she suffered a severe fright while standing on a step-ladder. Pain in the right loin followed, and blood appeared in the urine in two days. Dull, heavy pain persisted, accompanied by hematuria for three years. She had five attacks of renal colic, each lasting several hours. There were chills and febrile disturbance, and pus and blood appeared in the urine, but no albumen. Exhausting hematuria continued for weeks, with pus in the urine for days at a

time. Exploration March 29th, for suspected stone. A transverse lumbar incision was made, the fatty capsule torn through, and the kidney exposed. Numerous exploratory punctures were made with a needle, but no stone was found. The organ seemed normal in its gross appearance. Convalescence was prompt, and some relief of symptoms followed. Within a month, however, the pain and hematuria returned. May 23d, lumbar nephrectomy was performed through the old cicatrix. The patient is now entirely relieved; is passing on an average about 32 ounces of urine daily, with no pain and no blood. A letter from her July 20th, says, "I am getting along splendidly, have not felt so well for years as I do now, and my friends tell me that I look younger by ten years than I did before the operation." About the hundredth day the silk pedicle thread appeared in the wound, and was withdrawn. Wound healed.

A microscopical examination by Professor William H. Welch, revealed nothing which could explain the hematuria. He admits the ground for suspecting stone to be very strong, and further suggests that a small one may have lodged in the pedicle that was left, or may have slipped into the ureter.

Case XXI. Dr. S., Mt. Gilead, Ohio, aged 74, had a stricture of the rectum for forty years. A left lumbar colotomy was performed, using the transverse incision. Recovery. A good artificial anus was thus established, through which his bowels find relief.

All of these cases except No. 18 were operated upon in Mt. Carmel Hospital. Absolute cleanliness was enjoined, no anteseptic irrigation being employed. The small incision was commonly used. Drainage tubes were resorted to when there was much bleeding from torn adhesions. The after-treatment was simplicity itself; the main object being to do no harm by meddlesome prescribing. It is quite exceptional to have any febrile disturbance after the second or third day.

Three Cases of Laparotomy.

BY RUFUS B. HALL, M. D., CHILLICOTHE.

The cases of abdominal section presented in this paper are the last three cases which I have operated upon; and I think that they are of sufficient interest to claim your attention for a few moments. The first case was one of unusually large and adherent ovarian tumor in an old woman. The second was a Tait's operation. The third was a malignant ovarian tumor. Two recovered and one died. They will be very briefly detailed, and only the prominent features dwelt upon.

Case I. Mrs. K., aged 70 years, widow for 15 years. She was thrown from her carriage 40 years ago; the fall injured her hip to such an extent that she has led a very sedentary life since that accident. For the last 30 years she has been an invalid. Two years ago she first discovered the tumor; it was then the size of an adult head, and was solid. Her attention was first called to it from the fact that she suffered pain in the abdomen and had a free discharge of blood from the uterus, which continued at irregular intervals for about a year. This, and the fact that the tumor was solid, led her physician to believe that the tumor was fibroid. For a year previous to the operation the tumor had increased in size very rapidly, and for three months she had not been able to leave her room. When I first saw her, August 26th, 1886, she was sitting half propped-up in a large chair, which position she had been compelled to keep for more than two months. Her pulse had been frequent and feeble for many years, but now as she sits in her chair the radial pulse is barely perceptible. For two months she has had anasarca of the legs, and at the time of the operation they were twice the natural size below the knee; and from an abrasion upon each the dropsical fluid was discharging in great quantities. The whole abdominal wall was edematous. Her condition was so bad that it was decided to tap the cyst, with the hope

A. M., with the assistance of Drs. W. A. Hall and Barnes, of Chillicothe, Dr. Ricketts, of Portsmouth, Drs. Gillespie and Glenn, of Bloomingburg, and Dr. C. M. Wilson, of Washington, Ohio. All the uterine appendages were removed. It was with difficulty that they could be found, they were well down in the true pelvis, and the intestines intimately but not firmly adherent over them. After separating the intestines I came upon the left ovary and a cyst the size of a small orange which proved to be the dilated Fallopian tube. Just as I was about removing the cyst through the incision, it burst and spilt its contents into the abdomen. The right tube contained a small cyst which met with a similar fate while removing it. The peritoneal cavity was carefully cleaned and the wound closed. The operation lasted only twenty-five minutes, but the patient was profoundly shocked. She rallied very slowly, and at 8 P. M., her pulse was 100, but very feeble, and temp. 100°. At 6 A. M., next day, pulse 104, temp. 99½°. Her pulse fluctuated between 100 and 120, temp. 99½° to 100½°, to the end of the third day, when the pulse became weaker and more rapid, finally reaching 145 on the evening of the fourth day, when she died from exhaustion at 7½ P. M., 104½ hours after the operation.

This was a most unpromising case, and one that most men would much prefer not to operate upon. I at first refused to operate, but at last yielded to her urgent request. In this I am convinced that I was right. I well remember Mr. Tait's remark to me, that we had not the moral right to refuse to operate upon any case because it was a desperate one. He says that we have no right to select our cases, but to give every woman a chance for her life, even if it be the last chance.

Case III. Mrs. H., aged 40 years, sent to me from Vinton County by her physician; was admitted April 7th, 1887, presenting an obscure abdominal tumor. She had known of the existence of the tumor for eighteen months, but her health remained good until two months previous to the operation, when she began to lose flesh and strength. She is now fairly well nourished; the abdomen is about as large as that of a woman eight months pregnant. The peritoneal cavity contains ascitic fluid, which complicates the examination.

April 8th, I tapped the abdomen and removed about one gallon of yellowish fluid as thin as water. I could now detect fluctuation over the whole lower and anterior part of the abdomen. A vaginal examination revealed the uterus low down and in front of the tumor, and not very movable, with the pelvis partly blocked up by the tumor. The main tumor extended three inches above the umbilicus; above this, extending diagonally across the abdomen from right to left, could be felt an irregular hard mass about four inches wide and six inches long; it was slightly movable, but could not be separated from the main tumor, from which it appeared to be an outgrowth from the right side. I was by no means certain of the character of the tumor, and decided to aspirate it, with the hope of clearing up the diagnosis. This was done April 10th, and about one gallon of thick, dark-colored fluid removed, which coagulated by heating, and contained the ovarian granular cell of Drysdale; yet I did not feel certain, and was not satisfied that I had only an ovarian tumor to deal with. But with the patient and her husband's thorough understanding that there existed a doubt as to the possibility of the removal of the tumor, and with their consent, I decided to operate, and did so, April 14th, at 2 p. m., with the assistance of Drs. Barnes, Leslie and Hanley, of Chillicothe, and Dr. Kitchen, of Jackson.

I commenced the operation with an exploratory incision of about three inches in length. When the abdomen was opened, I was delighted to find the white, shining wall of an ovarian cyst. There were no adhesions just under the line of the incision, neither could I detect any above or at either side, until the lower end of the incision was reached; here, however, I detected adhesions on both sides in the pelvis. I now felt sure that I had had all my worry and anxiety about my diagnosis unnecessarily, that I only had a simple ovarian tumor to deal with, and that the adhesions could be easily overcome. I therefore tapped the cyst with a Wells' trocar, and emptied it, and through it another large cyst. After the cyst had been emptied of most of its contents, the solid part of the growth spoken of came into view, but the whole appearance of it was different from that part of the cyst that *had as yet* been exposed to *view*. The incision was enlarged to six inches in length,

when a most remarkable condition was observed. Over the front of the main tumor, for an area of about six by seven inches, there was nothing to indicate that the tumor was more than a simple ovarian cyst. It had the pearly, white appearance so characteristic of ovarian cysts. But over the top of the main tumor, on each side extending down into the pelvis, over every part that could be examined (except just in front), it had the exact appearance of the growth here presented to you. It was firmly adherent to the walls of the abdomen and pelvis, and the adhesions bled freely at every point separated. The solid part that was removed was pedunculated and an outgrowth from the top of the main tumor from the right side. It was completely surrounded by gut, which was firmly adherent to it. I recognized the fact that it was probably malignant, but as I had tapped the cyst, and as the gut could be separated from the solid portion, I decided to attempt its removal, and, if possible, enucleate the main tumor. I could separate the gut from the growth with ease, but it was so very friable that I was compelled to work slowly and with the utmost care, as the tissues were as easily torn as blotting paper, and the hemorrhage surpassed anything that I had ever seen in abdominal surgery. The tissues were so soft that the application of a ligature was impossible, as it would cut its way through them, and for the same reason pressure forceps were useless. The blood flew everywhere; I used the thermo-cautery on the surface of the intestines freely, touching the points that bled the most as I proceeded with the work of separation. When I had removed the solid portion, many feet of gut had been separated, the patient had lost a great quantity of blood, she was pulseless, and it appeared that she was dying. It was evident that to proceed further with the operation would be to have her die on the table, even if it were possible to remove the cyst, which I think was very doubtful. To relieve the shock and check the hemorrhage, the peritoneal cavity was filled with hot water, as suggested by Dr. Wylie, of New York. The edges of the incision in the abdominal wall were raised as high as possible, so that the abdomen would hold a large quantity, and the cavity was filled full, from an ordinary water pitcher.

The water was drained out by lowering the abdominal walls, and the cavity was refilled. again and again, until five or six gallons of water at 110° had been turned into it. The rapidity with which it relieved the shock was marvelous, and it checked the bleeding perfectly, and the water returned as clear as when it was turned into the abdomen. The operation had now consumed forty-five minutes, and I decided to stitch the opening in the cyst to the lower end of the wound and drain it by a large sized Tait's glass drainage tube, which was placed in the cyst, the cavity closed, and the patient put to bed.

The time occupied by the operation was a little less than one hour. By heat and rectal stimulation she rallied very slowly, and at 7 P. M., the pulse was 120 and temperature 100°. After that her progress was as satisfactory as the average case after an ovariotomy. The tube did excellent service, and a great quantity of bloody serum was removed through it. The tube was removed 65½ hours after the operation. She was able to sit up on the 21st day after the operation, and on the 27th day she went home, a distance by rail of fifty-five miles.

At the point where the cyst was drained there yet remained a small sinus, less than two inches deep, when she went home, which has since healed. There has been no return of the ascites to the present time, neither is there any perceptible enlargement of the abdomen. She reports by letter of recent date that she is gaining strength, but from the nature of the growth, permanent restoration to health is not to be anticipated.

This case presents many interesting features: among the most prominent are:

1st. The difficulties surrounding a correct diagnosis.

2d. The wonderful rapidity with which the hot water relieved the shock; and

3d. The rapid recovery from the operation which ensued, when one could not reasonably have expected it.

The Nature and Treatment of Cholera Infantum.

BY VICTOR C. VAUGHAN, M. D., PH. D., PROFESSOR OF PHYSIOLOGICAL CHEMISTRY IN THE UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

Probably a more correct title for this paper would be the nature and treatment of summer diarrhea; for cholera infantum is now regarded by some of the best authorities as differing in degree only from the milder diarrhea of infancy. The importance of this class of diseases is well understood by physicians generally. It is estimated that in the hospitals of New York City there are treated each summer not less than 25,000 cases of diarrheal diseases among children. Add to this those that are seen in private practice, and the number must be very large. It certainly would be safe to say that the average number of cases of summer diarrhea in children coming under treatment annually in the United States is not less than a quarter of a million.

The causes usually enumerated by writers on these diseases are heat, atmospheric conditions, and changes in the food. Of these causes, great stress has been placed upon the first two. However, heat should affect young children more than older ones; but Holt states that, of 431 of his cases, only 12.8 per cent. were under six months, while 59.5 per cent. of the cases occurred between the ages of six months and two years. Holt says, "The explanation is obvious. Under six months the great majority of the children of the poorer classes receive breast milk either exclusively or principally, while from that time on they are accustomed to be fed from the table, or on articles totally unfitted for infantile digestion. It is a striking fact that Hope, of Liverpool, brings out in his statistics of 591 fatal cases of summer diarrhea in children under two years of age, that only 28 had the breast exclusively; while Ballard states that, of 341 fatal cases occurring in Liecester, only two per cent. of the children had no food but the breast."[1]

1 New York Medical Journal, January 29, 1887.

Now there is no reason why heat and miasmatic influences should not affect those that feed at the breast as well as those that are brought up by artificial feeding, if the food has nothing to do with the production of the disease, as some few contend. That heat and atmospheric impurities have much to do with the causation of the diarrhea I am ready to admit; but their chief evil effects are upon the food of the child. The demonstration of this now amounts almost or quite to a certainty. Three years ago the writer discovered in poisonous cheese a ptomaine which produced nausea, vomiting and diarrhea. Later the same poison was found in ice-cream and in milk. The poison has now been isolated by as many as five chemists, and its chemistry and the conditions under which it develops, as well as its action, are fairly well understood. Chemically, the poison is diazobenzol, [1] which may be made artificially by the action of nitrous acid gas at a low temperature upon the nitrate, butyrate, or other salt of anilin. It is decomposed when heated with water to near the boiling point. It is developed in milk by the growth of a germ, which multiplies very rapidly when the conditions are favorable. These favorable conditions consist principally in exclusion of air, or the presence of a limited supply of air, and a comparatively warm temperature, the germ developing most rapidly at about 98° F. If milk be placed in cans, and tightly closed as soon as it is drawn from the animal, and then be kept warm, the conditions for the development of the poison are favorable.

A nice illustration of this was furnished by a case occurring at Long Branch, N. J., and reported by Drs. Newton and Wallace.[2] A number of persons at the hotels were poisoned by milk. Investigation showed that the cows were healthy, their food good, and their pasture and stables all in good sanitary condition. The milking was done at the usual hours of midnight and noon. The milk drawn at midnight was cooled by being left in cans surrounded by water until morning, when it was sent to the

---

1 Since the preliminary report on the chemistry of tyrotoxicon (*The Medical News*, April 2, 1887,) the writer has made an ultimate analysis of the salt obtained by the action of potassium hydrate on tyrotoxicon, and found it to be identical with the double hydrate of potassium and diazobenzol.

2 *The Medical News*, September 25, 1886.

hotels. This milk never produced any unpleasant effects. The noon milk was placed in closed cans as soon as drawn, with all the animal heat still in it, and carted a distance of eight miles during the very hot days of August. This milk was poisonous, and from it Drs. Newton and Wallace separated tyrotoxicon.

Of course, uncleanliness would increase the tendency of the milk to decompose, and it might afford the means of introducing the germ into the milk. Feeding the cow upon improper food, such as swill and refuse from breweries, would also render putrefactive changes more likely to occur.

Comparatively large doses of this poison, from one to one and a half grains, administered to cats, cause violent retching and purging, with death within from one-half to two hours. With these large doses vomiting is impossible, on account of the great constriction of the throat; but the retching is so violent that severe congestion of the lungs results. With smaller doses, about one-third of a grain, severe vomiting and purging are induced. The first stools are fecal; but the subsequent ones consist of clear serum, are rice-water like in appearance, and alkaline in reaction. The administration of small doses each day keeps up the vomiting and diarrhea, leads to rapid emaciation and death from exhaustion. In other words, it establishes a cholera infantum condition. The similarity to cholera infantum does not cease with the symptoms induced and the death of the animal; but the post-mortem condition agrees exactly with that observed in children after death from cholera infantum. The mucous membrane of the stomach and small intestine is soft and blanched. We would expect, after so much vomiting and purging, to find this mucous membrane congested, or at least reddened; but that such is not the case I have demonstrated by repeated post-mortem examinations of cats, dogs and guinea-pigs poisoned with tyrotoxicon.

Ehrenhaus says of the pathological anatomy of cholera infantum, "Generally the mucous membrane of the alimentary canal is pale and free from blood."[1]

Here we have the evidence for believing that this poison is an important factor in the causation of cholera infantum

1 Real-Encyclopædie der gesamten Heilkunde, B. ii. S. 436.

and similar diarrheas of children, the violence of the attack varying with the amount of the poison present. When we remember that these diseases are most prevalent among the poor classes of our large cities, where fresh milk is almost unknown, we can readily understand their frequency. By such people milk is often not obtained until it has begun to sour; then it is kept at a high temperature, and often in a most foul atmosphere, and we all know something of the readiness with which milk takes up bad odors. This milk is then eaten by the little ones, who are weakened by poverty and everything that poverty means; insufficient food generally, and that of the poorest quality; insufficient clothing, insufficient and vitiated air. With these facts before us, it is not surprising that in all our large cities thousands of children die annually from the summer diarrheas. Moreover, in our country places, how little attention is given to the food of children, we all know from actual observation. Cows stand and are milked in filthy barns and yards. The udders are generally, so far as my observation goes, not washed before the milking; the vessels for the milk are frequently found not as clean as they should be. Then there are the thousands of children that must draw their sustenance from bottles, the cleansing of which is in many cases not properly attended to. Crusts of decomposing milk form around the neck of the bottle, in the tube and nipple, and lead to the rapid decomposition of the entire contents of the bottle. I think that one of the most important advantages to be secured to breast-fed children arises from the lessened danger of infection of the milk with germs which may produce poisonous ptomaines.

I would not claim that decomposed milk is the sole cause of the summer diarrheas of children; nor would I claim that tyrotoxicon is the only poison that may be developed in milk. It is *only one of a large class of bodies which are produced* by putrefaction, and many of these are cathartic in action.

But will this knowledge concerning the development of poisons in milk and other foods aid us in the prevention and treatment of these diseases?

Preventive measures will consist for the most part in attention to diet, and especially to milk. I have drawn up the following rules concerning the care of milk:

1. The cows should be healthy, and the milk of any animal which seems indisposed should not be mixed with that from the perfectly healthy animals.

2. Cows must not be fed upon swill, or the refuse of breweries, or glucose factories, or any other fermented food.

3. Cows must not be allowed to drink stagnant water; but must have free access to pure, fresh water.

4. Cows must not be heated or worried before being milked.

5. The pasture must be free from noxious weeds, and the barn and yard must be kept clean.

6. The udders should be washed, if at all dirty, before the milking.

7. The milk must be at once thoroughly cooled. This is best done by placing the milk can in a tank of cold spring water or ice water, the water being of the same depth as the milk in the can. It would be well if the water in the tank could be kept flowing; indeed, this will be necessary, unless ice-water is used. The tank should be thoroughly cleaned every day, to prevent bad odors. The can should remain uncovered during the cooling, and the milk should be gently stirred. The temperature should be reduced to 60° F. within an hour. The can should remain in the cold water until ready for delivery.

8. In summer, when ready for delivery, the top should be placed on the can and a cloth wet in cold water should be spread over the can, or refrigerator cans may be used. At no season should the milk be frozen; but no buyer should receive milk which has a temperature higher than 65° F.

9. After the milk has been received by the consumer, it should be kept in a perfectly clean place free from dust, at a temperature not exceeding 60° F. Milk should not be allowed to stand uncovered, even for a short time, in sleeping or living rooms. In many of the better houses in the country and villages, and occasionally in the cities, the drain from the refrigerator leads into a cesspool or kitchen-drain; this is highly dangerous; there should be no connection between the refrigerator and any receptacle of filth.

10. The only vessels in which milk should be kept are

tin, glass or porcelain. After using the vessel it should be scalded, and then, if possible, exposed to the air.

With the attention demanded by these rules given to milk, it will become more valuable as a food, and the development of poisons in it before its introduction into the body will certainly be prevented.

But in the prevention of summer diarrheas, attention to the food must not stop with its introduction into the body. The ferment which produces tyrotoxicon is widely distributed, and it only awaits conditions suitable for its development. We do not know exactly what germ it is that produces this poison; but it is either the butyric acid ferment, or some ferment which is frequently developed along with the bacillus butyricus; because I have found that if some butyric acid ferment be prepared according to the method usually followed in making butyric acid, and milk be inoculated with this and allowed to stand at the temperature of the body for a few hours or at the ordinary temperature of the room for several days, the poison will appear. Moreover, as is well known, the bacillus butyricus grows best in the absence of air—we have already seen that the exclusion of air favors the development of tyrotoxicon. We are aware of the fact that the butyric acid ferment frequently does develop in the stomach. Therefore, I think that the prevention of these diseases necessitates some attention to digestion. If the food lies in the stomach or intestine undigested, putrefactive changes will occur there.

During the hot months, children which are allowed to take food at will, often drink large quantities of milk simply for the purpose of quenching thirst. Especially is this true when the parent forgets that a child would sometimes relish a drink of good water. I feel that this overloading of the stomach with milk, caused by thirst, often is of no little detriment. It is hardly necessary to specify in regard to other ways in which attention should be given to the digestive organs of children. Those that partake of other foods with their milk should be allowed only the most wholesome articles, and these should be in perfect condition. Moreover, the depressing effects of extreme heat upon the nervous system, and its consequent injury to digestion, should always be borne in mind.

Now we come to the discussion of the curative treatment of these diseases. The first thing to do is to stop the administration of milk in any form. The ferment is present in the alimentary canal, and giving the best of milk would simply be supplying the germ with material for the manufacturing of the poison. This no-milk treatment is not by any means a new idea. It has been taught for some years by a few of the best authorities; but it has not been sufficiently insisted upon. Moreover, the reason for it has not been hitherto understood. It was believed in somewhat of a vague way, that the digestive organs lose their capability of digesting milk, and experience showed that the exclusion of milk led to improved results. But now that we know that a powerful poison is formed from the putrefaction of milk, the necessity of its exclusion must become apparent to all. I reported last year a case which is so applicable here that I must be pardoned for quoting it in full. If the child had been an animal upon which I wished to experiment, I could hardly have selected conditions more favorable.

"July 30, 1886, about 1 P. M., I was called to see the seven months old babe of Mr. B. I found that the child had been vomiting quite constantly for some three hours. It had also passed watery stools some six or seven times. The eyes were sunken, skin cold and clammy, and pulse rapid and small. I diagnosticated cholera infantum. During the preceding night, the child had seemed as well as usual, and had taken nourishment freely from the mother's breast. Early in the morning it had been given a bottle of cow's milk, and soon thereafter the nausea and vomiting began. Later, as stated above, the child began to purge. The mother furnishing an insufficient supply of milk, it had been the habit to give the child cow's milk several times a day. I prohibited the further use of milk, both that from the mother and from the bottle, and substituted meat preparations and rice water as foods. I also prescribed pepsin, bismuth subnitrate, chalk mixture, and camphorated tincture of opium.

"The cow's milk which had been furnished the child was from an animal kept by one of the neighbors. On the evening of the same day that the child was taken sick, I obtained two quarts of the morning's milk of this animal.

The milk had the appearance of very rich cream, being of a yellow tint throughout. This milk was allowed to stand through the night of the 30th in the ice-box of a refrigerator. On the morning of the 31st I began the analysis. After pouring the milk from the pitcher, there remained in the vessel about two ounces of a fluid the color of port wine. Microscopical examination of this fluid showed the presence of pus and blood corpuscles. The blood was also detected by obtaining the characteristic bands of oxyhemoglobine with the spectroscope. The milk, which had already coagulated, was filtered. The strongly acid filtrate was rendered feebly alkaline with potassium hydrate, and then agitated with absolute ether. After separation, the ether was removed with a pipette, and allowed to evaporate spontaneously. This residue was dissolved in distilled water, and again agitated with ether. This ethereal solution left, after spontaneous evaporation, a residue which had a slightly brownish tint. I did not obtain the crystals of tyrotoxicon, doubtlessly owing to this trace of impurity; but the residue had the odor and taste of tyrotoxicon. This residue, dissolved in distilled water and given to a cat, produced retching and vomiting.

"That tyrotoxicon was present in the milk taken by the child shortly before the beginning of illness there now could be no doubt. It is true that the milk was abnormal in other respects also, inasmuch as it contained pus and blood.

"After the withdrawal of all milk and the use of the medicinal agents mentioned above, the child began to improve, and by the afternoon of August 1st it seemed so well that it was allowed a bottle of good cow's milk (from another animal); but soon after taking this milk it again began to vomit and purge. Milk was again withheld, and the same medicinal treatment resorted to. This attack was slight, and after it the child continued to improve until the night of August 4th, when the grandmother, who 'knew more about raising babies than the doctor,' fed the child bountifully upon milk. Again the vomiting and purging began, and it was more than a week before all symptoms of gastro-intestinal irritation had disappeared. About the 15th of August milk was again allowed, at first in small quantity, and this seeming to have no harmful

effect, more liberal quantities were given. The child has continued well since."[1]

That my experience in this is not unique will be made evident by the following quotation from a recent paper by Dr. L. Emmet Holt, physician to the New York Infant Asylum, who writes as follows:

"In children under two years of age, not fed at the breast, it is better to withhold milk entirely. This has been a subject of careful investigation during the past summer at the New York Infant Asylum, and both the resident physicians and myself have had this proved to our satisfaction by a large number of cases. Peptonized milk is very much less likely to disagree than either condensed milk or fresh cow's milk. But in many, even this caused an aggravation in the intestinal symptoms, particularly in severe and protracted cases. Again and again have I seen relapses brought on when milk was added to the diet in cases where the stools had been practically normal for two or three days."[2]

The food used may consist of chicken and mutton broths, beef juice, and rice or barley water. With this list, no difficulty will be experienced in giving the child sufficient nourishment. In the medicinal treatment the first thing to do is to cleanse the alimentary tract as thoroughly as possible. In the first stages of the diseases there is no better agent for this purpose than castor oil. But if there have already been several serious discharges, copious enemata of water will be more suitable. These injections may contain either an astringent or a disinfectant, or both. For the latter, Holt recommends benzoate or salicylate of sodium, and for the former, nitrate of silver or tannic acid.

The next thing to be done is to arrest the growth of the germ. This germ has been found so far to develop only in acid media. Therefore, I think it wise to administer some antacid. Probably there is nothing better in this line than the old chalk mixture. In the preparation of the chalk mixture, the druggist should be requested to use glycerine, as many druggists still use syrup in this preparation. The presence of the sugar leads to rapid decomposition during hot weather. It has been said that the

1 Proceedings of the Michigan State Board of Health, October, 1886.
2 New York Medical Journal, January 29, 1887.

use of the antacid is irrational, because the discharges are often alkaline. Of course, the serous discharges are often alkaline, because they consist of blood serum and will be alkaline unless they have remained in the intestine long enough to ferment; but the reaction of such discharges does not prove that the contents of the stomach and small intestine are alkaline.

As to the use of germicides, much is yet doubtless to be learned. No doubt the chief effect of subnitrate of bismuth in this disease may be due to its effect upon the germ. Holt makes an excellent showing for the salicylate of sodium, but since he has been using this drug he has followed the no-milk diet and doubtless his lessened mortality has been due to the exclusion of milk quite as much as to the salicylate. He uses this drug in doses of from one to three grains every two hours.

I am now making some experiments with the object of ascertaining the effect of certain germicides on the development of this poison. The results I will give in some future paper, but I may state here what my success has been in a few experiments with mercuric chloride. The method of conducting the experiments was as follows; Four-ounce bottles were filled with milk, milk and ferment, and milk and ferment, with mercuric chloride, closed with glass stoppers and kept in an air bath at the temperature of the body for six hours. Then the milk was tested for tyrotoxicon with the following results:

No. 1. Bottle containing pure milk only. Result, no poison.

No. 2. Bottle containing pure milk only. Result, no poison.

No. 3. Bottle containing milk and ferment. Result, the poison present.

No. 4. Bottle containing milk and ferment. Result, the poison present.

No. 5. Bottle containing milk, ferment and one-hundredth grain mercuric chloride. Result, the poison present.

No. 6. Bottle containing milk, ferment and one-fiftieth grain mercuric chloride. Result, the poison present.

The Surgical Treatment of Chronic Follicular Pharyngitis.

BY R. HARVEY REED, M. D., MANSFIELD.

There is, perhaps, no other affection of the throat that is so common (especially in what is known as the catarrhal belt), and which, at the same time, comes on so stealthly, is followed with so many grave complications, and yields so obstinately to all forms of treatment, as chronic follicular pharyngitis.

By chronic follicular pharyngitis I mean a chronic inflammation of the mucous membrane of the pharynx, involving the glandular structures, which become enlarged into papulæ, varying from the size of a pin head to that of a split pea, among which will be found winding numerous varicose veins, on a bluish or yellowish red back-ground of diseased mucous membrane. Some of you may more readily recognize this disease by the name of "clergymen's sore throat," chronic lymphadenitis, or granular sore throat, but as our political brethren say at every campaign: "It's the same old coon."

As volumes have already been written on this perplexing disease, and its history has been ferreted out from the time of Galen and Hippocrates, to which has been added an exhaustive study of its pathology, a minute description of its symptoms and physical characteristics, with a due consideration of its multiple complications, I shall not stop here to weary you with rehearsing all this matter over again, which can be found and studied to better advantage elsewhere, but will proceed at once to that which is of more interest to us all, as actual laborers in the field of practice, and will take it for granted that you are familiar with all these important adjuncts to its proper care and treatment.

Its *diagnosis* is easy and simple, and can often be made with the naked eye, and, if not, is readily determined with the aid of the laryngoscope, when a number of shiny or pearly-looking follicles will be found studded over the

pharynx, among which will be seen a network of enlarged veins, winding over a dull bluish or yellowish red mucous membrane, which, at times, looks dry and glistening, as if covered with a thin coat of varnish. You will often find these follicles and veins invisible until after you have carefully mopped off the accumulated mucus with a swab, when this disease can be readily distinguished from ulcerous coryza, adenoid vegetations, or mucous polypi. In the former, there is ozena, and a discharge of pus with a peculiar "crushed bed-bug" odor. In the second, if they cannot be distinguished by the unaided eye, or by digital examination, the rhinoscope will readily aid you in distinguishing between the follicular enlargement on the one hand and the vegetating growths on the other. As to the latter, which is referred to by some authors, I could not be induced to believe there is a medical student here to-day that is not smart enough to discriminate between a mucous polypus of the posterior nares, and these follicular enlargements of the pharynx, at a mere glance.

With all that has been written on this subject, I will venture to say that many of you have shared with the author of this paper, the chagrin and disappointment experienced in a failure to give relief to many who have applied for aid, whom you have not only confidently but diligently and skillfully treated, in accordance with one or more of the vaunted methods of the many writers on the subject, and in doing so, "got left after all," and your patient has left disappointed, if not disgusted.

It is true, the simpler forms of this disease are apt to be neglected, and patients are hard to convince of the importance of treatment, until they have contracted some complication, and apply to you for relief from deafness, chronic hypertrophy of the nasal membranes, or a continued, dry, hacking cough, which provokes their attention, and often until told by the physician or surgeon that they have a chronic sore throat, seem to be wholly unaware of it, except to remember they did have occasional attacks of sore throat, at which time the complication they complain of grew worse.

I have seen a half dozen of these enlarged follicles so irritate some of the branches of the pneumogastric nerve as to produce almost uncontrollable paroxysms of cough.

ing. Indeed, I have seen patients, who, from no other source, have lain awake night after night, coughing from the effects of these follicles acting as an irritant to the pneumogastric nerve, until from the loss of sleep, they have become feverish, lost their appetites, become anemic and emaciated, while the constant strain from coughing on the lung itself and bronchial tubes has really developed a form of lung trouble that was alarming. On the other hand, I have seen the same patients cease their coughing in a few weeks, and often in a few days, by splitting open these follicles, one by one, with a sharp bistoury, and applying a saturated glycerine solution of carbolic acid, repeating the application of the carbolic acid every second or third day, until every vestige of the follicular enlargements have disappeared. After this, milder applications with the spray will suffice, until the mucous membrane of the pharynx regains its normal condition, and with its improvement, the cough disappears, the patient gets the benefit of refreshing sleep, and regains his normal health and strength.

If the uvula has become elongated and flabby, as it often does, cut it off, and thus get rid of its irritating effects. A simple elongated uvula, under these circumstances, will often start up a violent paroxysm of coughing just as soon as the patient lies down. In fact, I have seen these follicular enlargements so extremely sensitive that the slightest irritation, the mere touching of one of them with the point of a probe, would start up a violent paroxysm of coughing. Do not understand me to say that when patients have tubercular phthisis, followed with a chronic follicular pharyngitis, the treatment and removal of these follicles will cure them; it will often give them great relief, but it will not cure them. But, I do say, that an irritation of the lungs that has been induced by a continued reflex cough, caused by these follicles, if allowed to go on will, and often does, result seriously, but from which the patient will get prompt and permanent relief if properly treated and the exciting cause removed.

After the follicles have been destroyed, any soothing application may be used advantageously; one I prefer is a solution of borax combined with water of thyme, or eucalyptus, to which I add a small percentage of carbolic

acid, and dilute with sufficient distilled water to suit the case. Aqua rosæ may be used with or in place of either of the above in some cases. In other cases, insufflations of powdered iodoform, or the impalpable powder of boracic acid, will give good results when the spray will fail.

If the varicose veins do not subside, and the mucous membrane still continues thick, it should be thoroughly mopped off with the tr. iod. comp. once or twice a week, and followed with the milder applications, as above mentioned, keeping a close watch for any new formation of follicles, which should be cared for at once, if they appear, by either cauterizing them with carbolic acid, or by laying them open with the bistoury and then cauterizing them.

In many of these cases, the uvula will be found to be very much elongated, and streaked with varicose veins, which complicates the trouble, and seems to keep up such an amount of irritation that amputation of a portion or all of it becomes necessary and shouid be done promptly.

In a number of cases that have come under my notice, a chronic enlargement of the tonsils, with chronic inflammation of the secretory ducts, has been the source of a continuation of the follicular disease of the pharynx, and especially so when there was marked chronic inflammation of the ducts, which often occurs without a great amount of enlargement of the tonsil proper, when nothing but complete enucleation of the entire tonsil will give relief. In some of these cases I have seen the ducts of the tonsil so diseased that you could pass a probe the size of a small rye straw a quarter, and sometimes a half an inch into them, removing at the same time a cheesy secretion, which was offensive in the extreme to the olfactory nerves. I have never found the use of any local application to these ducts of any permanent benefit, and consider such treatment a mere waste of time and a useless expense to the patient. The cutting off of a slice of these "honeycombed" tonsils will seldom result in any permanent benefit, and usually requires a second operation. As long as any part of these diseased ducts is allowed to remain in them, they keep up their persistent irritation to the pharynx.

The removal of either the uvula or the tonsils can easily be done, and with little or no pain to the patient, by the use of cocaine. They soon get well, and the previously

obstinate mucous membrane of the pharynx will be found speedily yielding to treatment.

The intimate relation of the pharynx with the pituitary membrane is such that a chronic inflammation of the latter will keep up the same in the former.

Although the glands of the Schneiderian membrane are small and the follicles in a normal state very difficult to observe, yet they do occasionally become enlarged, and require treatment, and must either be destroyed by cauterization with some chemical, (I prefer carbolic acid) or removed with the thermo cautery, and until the mucous membranes of the nasal passages are got into a healthy condition, you cannot expect to get a permanent cure of the trouble in the pharynx.

As in the treatment of the mucous membrane of the pharynx, after the follicles are removed, the use of mild remedies with the spray, or in the form of powders, will be found to give the best results in the treatment of the pituitary membrane.

Other complications may interfere and require treatment. The most dreaded of these is the deafness that is nearly sure to follow, sooner or later, chronic follicular pharyngitis. Not that the disease of the Eustachian tubes seems to aggravate the throat trouble, (although I have no doubt it has its influence) but the permanency of the deafness resulting from this disease, and its persistent tendency to get worse, and its resistance to all forms of treatment, especially when of long standing, makes it a complication to be dreaded by both the patient and the surgeon. Should this occur, prompt treatment by the use of the Politzer method of inflation of the middle-ear, or by the use of the Eustachian catheter should at once be resorted to. With the latter the use of an etherial solution of iodoform will be found quite beneficial. In this way the iodoform in fine powder can be carried into the Eustachian tube if not the middle-ear. When there is a pharyngeal or bronchial complication, suitable treatment must be directed to it as the case may require.

In addition to the surgical treatment of this disease, the general condition of the constitution must be looked after carefully, and the use of alteratives and tonics directed in accordance with the peculiar condition of each case.

The above general outline of the treatment of this annoying disease I have followed in the main for over five years (after having tried nearly all the others recommended in our books) for the simple reason that I have been enabled by this method of treatment to promise the patient more, and at the same time fulfill my promises oftener and with more certainty than with any other form of treatment I have ever tried. Hence I have given you this little experience in the treatment of this disease for just what it is worth, and at the same time I am open to conviction or conversion to any other form of treatment that will insure me better results in the management of this prevalent and obstinate disease than the one I am now practicing.

DISCUSSION.

Dr. W. C. Chapman, of Toledo: In diseases of the pharynx, especially those which you call pharyngitis, I recognize, as the author does, two forms of follicular pharyngitis: one, in which there seems to be a deposit of white matter upon the epithelium—and which is often taken for some other trouble—and another, where the follicles themselves are inflamed or congested so that they stand upon the membrane as little beads or globes of glistening mucus. These are found, always, in some form of follicular pharyngitis. If you see these cases early you will find that the membrane around these mucous beads is dry, congested and red. This is a very serious condition of the pharynx; not because life may be at all at hazard, but because we have a condition very difficult to cure. We may relieve for a time, but we find that the real cure of the diease is very difficult; not because the disease *per se* is difficult, but because you cannot get the patient to follow your rules. We have a great deal of trouble arising from the over-use of this member. We have but very little follicular pharyngitis among our best actors, from the fact that they know

how to use their voice. We have very little of it among the best singers, and by this, I do not mean those who try to sing and cannot sing; but with ministers, those of them who get their voice at a peculiar pitch, or whang, or twang, this is very common. In those cases we always find some elongation of the uvula. I have never found it necessary to amputate it. I mean by that the amputation of the esophageal muscles which draw up the uvula. I never found it necessary to take off of the uvula anything but the redundant mucous membrane. I have known it to hang down upon the base of the tongue, irritated and so elongated that it fell down into the throat, onto the base of the tongue. I have treated these with the scissors, and found that it would draw up in time—in the course of a week. I always amputate the mucous membrane which hangs down with the beaded mucus upon it, and which is congested and a source of irritation. I never found any benefit from iodine or carbolic acid, but I have had wonderful results from strong caustics. I don't believe I ever cured, or saw relief, in a case of well marked follicular pharyngitis without the use of some cauterization. The chrystal chloride of zinc placed upon one of these follicles will destroy it. I would never destroy more than one or two of the follicles at a sitting; you would get up a tremendous irritation if you did. But even preferable to chloride of zinc is the galvano- or thermo- cautery—touching merely one or two with the galvano-cautery. I have never used the thermo- cautery, because the other is easier to pass into the speculum. You use a white-heated platinum wire and burn one or two at a sitting. I never have seen one that had been well cauterized and burned clear down to the base, return. After that, the treatment is simple. My particular treatment for follicular pharyngitis is gum-drops: I let the patients eat all of them they wish to. As an emulsion it has a wonderful effect upon the throat. If you

once treat a patient so that you have cured all the redundancy of the mucous membrane—of the follicles—you will have it cured; it is very easy to treat if it is done radically and done at the time.

DR. REED (the author): I don't think they would return after being cauterized, if cauterized thoroughly, but they are apt to return with all other forms of treatment. My intention was to say that if you didn't thoroughly cauterize or destroy them by some method they will come back, and the method I have found very successful is the one I speak of. I have no doubt the doctor's method is just as good as the one I am using.

Whooping Cough: Its Treatment and Prompt Cure.

BY JULIAN HARMON, M. D., WARREN.

You may the more readily be led to the cure of whooping cough if I tell you how I was led to it myself. On returning home, March 1st, 1849, after graduation, my father asked: "What did Prof. Kirtland say of whooping cough?" Not much. "What did Dr. Delmater say of it?" Nothing special. "They did not teach you, then, how to cure it?" No, sir, they did not, only to palliate it. "Then you must study it for yourself. Read all you can find about it. Watch it carefully—do your best to cure it You may succeed. If you do, your life will be of some good to the world." The earnestness of his manner recalled a scene of my childhood. His youngest child was born in the spring of 1835. Late in the ensuing fall it had whooping cough, and was not fully relieved when measles was prevailing. He said to his wife, "Sarah, if Willie takes the measles we shall lose him. If I could have cured his cough a little sooner, he might go through —but Willie's lungs are in no condition to stand the black measles."

The sadness of his manner is vivid to my eye even to-day. All sorrow is sacred. The higher the nature which suffers the more sacred its sorrow. Dr. John B. Harmon was a master man—in intellectual power a peer among the very greatest. Six feet high, straight as an arrow—massive head requiring an 8¼ hat—face marked with strong outlines—he was the embodiment of dignity and command, toned down by a natural diffidence, and his consciousness of the lack of early educational advantages. In medical sagacity, a Sydenham—in surgical dexterity, a Hunter. For fifty-five years he gave to Northern Ohio the skill of a most original and independent thinker, and the endurance of the hardiest of hardy pioneers. He went home in his 78th year—form erect, step agile, and mind clear to the

last breath. He was said to have been "exactly like his father—looked like him, walked like him, talked like him, thought like him—like him in every particular." His last child seemed to be his own counterpart. It was natural, therefore, that he should be profoundly touched by the loss of his babe, and regret that he could not have sooner cured its cough.

It is greatly to his credit that as early as 1835 he believed in its curability, and in 1849 urged me to further effort. I asked him what he had found beneficial. "Mercurial cathartics, frequent emetics, stimulating expectorants, anti-spasmodics, especially stramonium; and sometimes quinine cuts it short," was his reply. In that answer he gave me the key to my subsequent success. The epidemic then prevailing soon subsided, but under his guidance but few cases lasted beyond ten days, near one-fourth the natural duration. In 1854, I again had opportunity to try for its cure, and attained the most complete success. Later experience, and the discovery of the bromide of potassium, chloral, etc., have furnished more reliable medicines, but the principles of the treatment remain unchanged, and hold good upon the new theory of bacteria, as well as upon the old one of malarial influence upon the nervous system, and resulting congestion and inflammation.

Let me briefly outline the treatment, say in case of a robust child four years old, which has been coughing two weeks and whooping one:

First, give a powder of calomel, 1 gr., chlorate potass., 3 grs., every one, two, three and four hours, till free purgation. Second, give ipecac, two grs., tartar emetic, 1-16 gr., in teaspoonful of solution of chlorate of potass., every five minutes till free emesis. Repeat after each paroxysm of cough. If there is decided fever, give it every hour between paroxysms. Third, after the first operation of the emetic, give the anti-spasmodic. I often use the following: R. Bromide potass., 30 grains; chloral, 15 grains; water, 2½ ounces; tr. stramonium, 2 drachms; spts. nitre, 2 drachms; simple syrup, q. s. to make four ounces. Give one teaspoonful at a dose. Belladonna, Indian hemp and hyoscyamus may be used alone or in combination like the above. Some objections pertain to

each, and skill is required to select the best form for each case. Enough must be given to make a decided prolongation of the intervals of rest. Fourth, give quinine, one to two grs., three times a day. I usually give it in syrup of coffee, with licorice.

As a rule under this treatment, the child will not whoop after twenty-four hours, and the cough will entirely cease within five or six days, often within two or three. If such a child be seen within the first few days of the cough, the following will be good enough:

℞. Bromide Potass.....ʒij.
Tartar emetic.....grs. iij.
Chloral .....ʒj.
Water.....
Simple syrup.....aa.....ʒiiij.
M. Sig. Teaspoonful every three or four hours.

Give the cathartic and quinine as before. The child will not whoop at all. Cough will cease in three or four or five days. The friends will say, "it only had a bit of a cold."

In case of a dry form of the cough, or of excessive viscidity of mucus, an expectorant, containing senega, blood-root, licorice and muriate of ammonia, will aid in the cure. The quinine may be given in it. In case of anemia, iron must be given with the quinine. In case of plethoric scrofula, iodide of potass. must be given. In anemic, scrofula the syrup of iodide of iron is best.

In short, the system of the little patient is to be strengthened in its every weak point. The disease is to be attacked at all its strongholds simultaneously. If one proves a little strong, plant another battery against it, push it close up, charge the gun with a double load, and soon the capture will be complete. In some cases of debility, a stimulant may be added to the emetic, as nitre, spts. ammon. ar.; or whisky, or brandy. As in the treatment of all other diseases, the greater the skill and experience, the more complete will be the success. A young practitioner must be cautious, but need not be discouraged because he fails of the success I have indicated above. He will soon learn to verify the truth of the rational and prompt curability of whooping cough.

About 1851, Dr. Bigelow, in his "Nature and Art in Disease," cites this cough as self-limited and incurable.

As a shield against homeopathy the book may have done some good, but the dictum is proven to be false by the cure of this very disease within a twentieth part of its natural duration, so-called. A limit which varies from thirty to one hundred and twenty days is very capricious. Let us kick it aside. While the per cent. of mortality of this disease is small, the aggregate is large, for all children seem to be born to have it. Let us give them the boon of its cure. The youngest and the most delicate will bear treatment effective enough to cure it promptly.

I have applied this plan to a babe only three days old at its attack, which rapidly developed general convulsive paroxysms; all gave way readily; and an experience of thirty-three years justifies me in saying it is effective, easy and safe.

The good effects of the mercurial, I doubt not you will all testify to, and you will readily see its efficacy is enhanced by the chlorate of potass. The emetics more completely expel the mucus from the air passages, and make a sedative impression on the circulative and nervous systems, and thus doubly prolong the intervals between the paroxysms of cough. The antispasmodic comes in to quiet the whole irritation, and hence postpones still further the next recurrence. Quinine is meanwhile asserting its antiperiodic power, which is quite as decided in this disease as in ague. If any fear frequent emetics, let me say the fear is idle. The child will vomit far less in the first twenty-four hours than if they were not given; and as the disease will be cut short very soon, the total vomiting will be in fact quite insignificant. I need hardly add that this plan requires careful supervision in all severe cases where it is desired to attain the most prompt effect, but it is worth while to know that a disease called incurable "from of old till now," is really one of the most curable of all which afflict and destroy the flower and hope of the world.

The Modus Operandi of our Therapeutical Forces.

BY E. CONN, M. D., AKRON.

In a former essay, read before the North-Eastern Medical Society and published in part in the Cleveland Medical Gazette, in discussing "Legitimate Medicine" I asked these questions: "What is the Modus Operandi of our Therapeutical Forces, and how are the somatic functions influenced by drugs?" These are questions, the profundity of whose depths has not yet been reached, and the thorough understanding of which may be beyond the finite mind to grasp, yet they are questions of vast importance, for, without some knowledge of the modus operandi of our therapeutical remedies, the practice of medicine, at least the therapeutic part of the practice, would be the veriest farce, and the regular physician would have no more claim to respect in legitimate medicine than the quack in quackery.

In writing now upon the theme I do not wish to conceal the difficulties of the subject, nor to be frightened from it by the fact that the action of many of our drugs is not clearly understood, that much is veiled in mystery, and that doubt and uncertainty attend us at every step. It is one of the characteristics of the coward to be frightened away from that which he knows by that which he does not know; hence we often sit still and refuse to give our consent to a measure, for fear of exposing our ignorance. It is the physician's business to know all that is knowable in medicine, and in practice to live up to that knowledge.

In discussing this subject, I propose to consider first, the organism upon which our remedial forces are to operate. That we may know something of the wonderful mechanism of these bodies of ours; something of the natural or physiological laws under which the organism exists, and what must obtain that we may have a healthy condition of the system, let me call your attention to some of these laws, and the relations existing between the different parts, and how they are interdependent, and yet separate and distinct in the

functioning powers of the organism. Many systems of philosophy have been founded, and innumerable theories advanced to explain the phenomena of life, and yet the mystery is unsolved. In all the wonderful works of creation, the most wonderful, as well as the crowning act, was the creation of man. The body is not only the most beautiful, the most symmetrical, the most harmonious, but it is also the most complicated mechanism of which we have any knowledge. Our bodies are under natural law—physiological law, if you please—the bounds of which cannot be passed. These laws cannot be violated with impunity—nay, more, the organism cannot exist, only under the physical conditions recognized as health. Corporeal man is but a wreck of humanity, out on the sea of life, destined to be dashed to pieces sooner or later, by the ebb and flow of our ever changing and finally changed organism; so that life is dependent upon the stability and harmonious workings of the elements or tissues that go to make up the human frame. The development of the different component parts of the body, the cessation of the growth of the different parts after an inherent principle of limitation, and the preservation of a definite size and form during the constant molecular changes incident to nutrition, are physiological mysteries which we cannot with our present knowledge, undertake to explain. These working as a harmonious whole, under the laws of equilibration, we recognize as health. If we understand thoroughly the physiology, we have good grounds on which to study the pathology, for disease is propagated in the same manner as health is. The body, with its multiplicity of organs, all tending to carry it forward in life, has been compared to a chariot, drawn by many steeds, whom Archaes, the charioteer, gathering their numerous reins, guides with an unwavering hand; but whenever one more restive than the other bolts the path, or rears in the traces, the rest are thrown into confusion, and but for the soothing word, the strong curb, or the stinging lash, might dash the vehicle to pieces.

The organs are united and harmonious so long, and only so long, as the *tone-vital energy* (call it what you may)—I shall call it the *capacity* of *organized cells* to appropriate material from an external medium, to decompose it, to store

up one portion of it and to eliminate the other, of the system is strong enough to repress the outbreaks of individual parts; each leans upon the other, and all combine to preserve and enliven the organism; but no sooner does the moderating power of the nervous system relax, than their silent and consentaneous movements cease; and one or two, many or all, the parts are thrown into disturbed action, which becomes the more complicated and inextricable the longer it lasts.

Again, the organism is like unto a ship at sea, built of material that is subject to change and finally destined to go to pieces, so that under the natural laws of the organism, our bodies must sooner or later surrender to the constant and ever varying changes of their component parts. The two great constant and necessary changes going on in the organism, viz: *Constructive* and *destructive* metamorphoses, are under natural law, and presided over by the great sympathetic nervous system, or, as it is sometimes called, the nerve of chemical action, nutrition and reproduction.

Again, the human body is like unto an army of men, commanded by a General-in-chief, who has his different army corps, divisions, brigades, regiments and companies, each under skilled sub-commanders; but all moving forward harmoniously together for the same end. So the functions of life are under the supreme control of the centre of centres, the brain, with its multitudinous subdivisions of smaller centres, for the different organs and tissues of the body; each and all working steadily to carry the body forward in life; so that growth, development, digestion, assimilation, nutrition, absorption, circulation, respiration, secretion and excretion, together with all the morphological changes and mutations of the different organs and tissues, all are steadily, yet harmoniously, working together for the maintenance of health, and health (says Tully) is at least indicated by, if it does not actively consist in, a natural, regular, easy and perfect discharge of all the functions of every part of the living animal system. Disease in its widest acceptation is any deviation from health, either in function or structure, or both, in a part or the whole of a living system; or it is some vitiation of the actions or sensations, or both in conjunction, of the living, active and sensitive solids. A medicine, or, in

other words, a remedy for disease, is an agent, or process, which by proper application or employment, changes, counteracts, or overcomes disease, and either directly restores the functions to a healthy state, or produces such a condition merely as will readily become a healthy state on discontinuance of the medical agent or process.

But all our comparisons are lame when we try to comprehend the minute workings or processes of the organism, hence we reduce it to its elementary parts: *matter*, *motion* and *force*, and try to study their relations and actions. This, then, is the organism upon which our therapeutical forces are designed to act, and must act in such a way as that the equilibrium of the component parts, or elements, shall not entirely pass from under the natural laws of the organism; for at that point all drug remedies, at least all of any potency, cease to be medicinal and become disease-producing.

Secondly, I wish to consider the question—*How are the somatic (or bodily) functions influenced by drugs?* Through what channels, and by what avenues, do drug forces produce their effects upon the animal economy? I think if we scan medical literature aright and weigh the opinions of medical men in general, we will find one of two opinions to be the prevailing faith among the physicians of the whole civilized world; namely, that medicines either operate by actual contact with the organ or organs in which are perceived the first manifestations of their effects, by being taken into the mass of the circulating fluids, and (what must follow, of course, though I believe it is not commonly mentioned, as part of the creed) by being extravasated, or deposited in, or upon the organ, or organs affected; or else, that they operate upon the blood merely.

I take it that this is the almost universal opinion of the medical world, not so much because it is expressly so stated, as because of the opposition, or total disregard of every other opinion, hypothesis, or theory, advanced to explain the action of drugs, and there have been some bright and shining lights appearing along the medical horizon, men of critical observation and of deep thought, who have opposed this theory of drug action, who have advanced a much more reasonable, and I think the true theory—a theory that to my mind explains more of the

observed facts. "All science," says Emerson, "has one object, viz., to find a true theory of nature. Whenever a true theory appears it will be its own evidence. Its test will be that it will explain all phenomena." Yet, notwithstanding the frequent efforts to move forward, and obtain a more rational explanation of the action of drugs, still the old theory, a relic of the humoral pathology unhappily not yet extinct, prevails, and medical men write, prescribe and act, as though it were a demonstrated fact, that drugs produce their effects some way or other, unexplainable perhaps, by being taken into the mass of the circulating fluids, especially the blood, and carried and deposited in the parts where the effects are manifest. As respects the notion of the operation of medicines by being taken into the mass of the circulating fluids, and being actually extravasated, so as to come in contact with the proper substance of the part in which the manifestations are perceived, nothing can be more improbable, nothing can be more destitute of proof. The theory, or rather opinion, stands unproved and unprovable; yet it appears, as an "Ignis Fatuus," to allure not only the non-medical multitude, but also the great mass of the profession away from scientific truth, into the labyrinths of the murky and beclouded past, made doubly dark by the ignorance and false notions of the past 60 centuries. It is a fact that the cerebrum, for example, is neither sensitive to, nor motive from, the direct and immediate influence of medicinal agents applied to its substance; and the same in all probability is equally true of all other organs in the system. I consider it as certain that remedial agents will not produce their effects by application to the denuded cerebrum, cerebellum, spinal cord or nerves merely. Medicinal effects can be produced only by an application upon organs to which nerves are sent, and not by application upon denuded nerves. Again, nerves whether motor or sensory, are incapable of receiving medicinal impressions except at one of their extremities.

The functioning power of the organism, and every organ and tissue, is under the control of the nervous system, regulated and controlled by that system, through some one or more of its many ramifications. This is a demonstrable proposition; hence we conclude, that if you would

influence the functions or processess of life, you must do so by, or through, the nervous system. The doctrine of the existence of morbific matter in the mass of the circulating fluid—a doctrine exceedingly popular these last few years—and the necessity of the reception of medicinal substances into the blood vessels in order to obtain their remedial effects, and indeed all the doctrines of the humoral pathology, appear to be entirely in opposition to the Baconian philosophy, as they rest on no proof, and shackle medicine, even to this day. Such speculations, for they do not mount to the dignity of theories, encumber medicine far more than phlogiston encumbered chemistry; and until the non-medical multitude, as well as physicians, are thoroughly rid of them, they will continue like a millstone about the neck.

The opinion that all remedies, or even remedies in general, are taken in their entire state into the mass of the circulating fluids, and operate upon the blood on the one hand, or that they are carried and come in contact with the proper substance of the parts, or organs, in which their manifestations are perceived, on the other hand, appears to be an exceedingly rude and mechanical notion. Very numerous pathological facts, of considerable diversity of character, might be cited to show that the actual contact of the medicine with the proper substance of the organ, in which the manifestations of the operation are perceived, cannot possibly be necessary for the production of the remedial effects of any internal remedy whatever, not even of emetics and cathartics. Dr. Tully quotes a case reported by Professor Knight, of Yale College, in which by the passage of a loaded cart across the abdomen the jejunum was completely divided. The physician first called immediately administered a plentiful quantity of hydrogogue cathartic salts. In four or five hours the dose purged freely, producing the peculiar watery evacuations characteristic of the drug. In about twelve hours the patient died, and on post-mortem, the lesion above named was found, and apparently the whole of the cathartic was found in the cavity of the abdomen.

I am convinced that medicines act only upon the living, moving and sensitive solids of the economy; that the fluids are only acted upon by and through the solids; that

they act by the impression which they produce upon the nervous system, which impression is conducted by nervous communications from the parts on which their first impression is made to the parts in which their operation is manifest.

Dr. Chapman in writing upon this subject says: "We are to reject the fluids altogether in our inquiries relative to the operation of medicines, because we have in that law of the animal economy called sympathy, or consent of parts, a solution of the problem, infinitely more consistent with existing state of our knowledge." "Conformably to this theory, whenever a medicinal substance is applied to a susceptible portion of the body, externally or internally, an action is occasioned, which is extended more or less, according to the degree of sympathetic connection which the part may maintain with the body generally." "In every case, whether it respects the operation of medicines, or the production of disease, the spot primarily acted upon is a point from which is diffused the radiated impressions."

If we go outside the domain of drugs, and inquire how the functions of life are acted upon, what radical changes are brought about through impressions made upon the nerve-centres, we must recognize the fact that many diseases that arise from wounds are, undoubtedly, the sequel of functional disturbances of nerve centres, as the result of, first, simple septicemias, and, second, the fears and imaginations of the individuals, their friends and advisors. When we consider the influences of fear, anxiety, joy and anger upon the great nerve-centres, remembering that these are capable of so modifying any and all the secretions of the economy, even to the milk within the maternal breast, or the saliva, until toxic properties are developed; that persons have died within a few moments or hours, from these and kindred causes; that individuals in robust health thereby are permanently invalided, rendered insane, thrown into convulsions and catalepsies; we understand how, for instance, cases of so called hydrophobia may arise, even without the dog; and we understand, also, how the functions of life are entirely under the control of the nervous system. In disease the tissues of our bodies become altered, and are separating and being discharged by various channels, more rapidly than in health—

greater metamorphoses, and hence a disturbance of the equilibrium of the organism. True, but the real or moving cause of many diseases we do not know but we *do* know that the mysterious harmony of the *vital, chemical,* and *physical* relations, which exist, is broken up; in other words, the equilibrium is disturbed; but no physician, or neurologist, however able, expert, or talented, has ever been permitted to fathom the mysterious workings of the nerve-centres under profound agitations of the mind, or to discover what influence the perturbed mind may have reflexly upon the nervous system, or through it upon morbific agencies that may already have been implanted within the economy.

"It is certain" says Dr. Dewees, "that those diseases which arise from a point, as probably all diseases do, (more strikingly those occasioned by inoculation,) the matter introduced is not infinitely divided and spread over the body, but in reality only the *action* which the matter had originally produced." "These," continues our author, "are the general principles which apply to the system in every condition, and which explain the modus operandi of medicines, as well as the modus operandi of the causes of disease. The spot, thus acted upon, is the focus, from which is irradiated the more diffuse impressions."

Therefore my argument is, that drug forces produce their effects upon the system, not as is generally supposed by being taken into the mass of the circulating fluid, and there carried about and deposited in or upon the parts in which are observed their operative effects, but that they operate by the impression, or influence, they produce upon the nervous apparatus with which they come in contact. And whether administered through the stomach into the alimentary canal—the most natural way of reaching the system—endermically, hypodermically, or injected directly into the blood vessels, the impressions they produce are always upon the living, moving, active and sensitive solids of the economy; and these impressions are carried by that law of the organism known as sympathy, or consent of parts, to the different organs and tissues in which are perceived their remedial operations.

This theory (if indeed it be a theory, rather than a fact) appears to my mind to be more in accordance with the

known laws of the organism, experience and observation than the one so commonly believed and so blindly and implicitly followed.

In the third place, I had hoped to discuss the effects of such influences, but for this I have very little space left. All organized bodies are influenced, either by *irritation* or *stimulation;* meaning by these terms respectively all change produced in an organ, or tissue, from the slightest disturbance, even the prick of a pin, to the most profound laceration of the organism—*irritation;* and from the slightest stimulant effect, even the smell of food, to the most profound coma, produced by a lethel dose of a poisonous drug—*stimulation.*

In other words, I believe that the bodily functions are operated upon by our therapeutical forces, in and through the nervous apparatus of the organ, or tissue, of the part influenced. Drugs have different effects upon the economy, such as a primary, immediate and speedy effect, as well as a secondary, remote or distant effect; and in certain diseases, especially exhausting diseases, we are not warranted in giving them, even though the first effect is palliative of all the symptoms, for the secondary effects may over-balance the temporary good, and even assist the disease in its progress to a fatal end. This was very apparent in the old treatment of fevers, by vomiting, bleeding and purging; the first effect was always amelioration of all the symptoms, but the secondary effects tended to hasten the fatal issue. This was so thoroughly impressed upon some of the leading minds of that day, that the very learned and original thinker, Dr. Graves, desired no greater honor than that it might be written on his tombstone, "He fed fevers." So now it is more than whispered around that quinine has killed not a few typhoid patients. But of all the pathies of the present, that pathy which has for its foundation stone, in therapeutics, *symptomatology*, is the most misleading and unreasonable.

We recognize the fact, that pathology is only abnormal physiology, that disease is propagated in the same manner as health is, and that the changes taking place in a diseased organ or tissue are abnormal, perverted, excessive, or defective physiological changes, in consequence of disturbed function, or sensation, or both in conjunction with the living,

The Radical Cure of Hernia.

BY H. J. HERRICK, M. D., CLEVELAND.

Professor of State Medicine and Hygiene, Western Reserve University, Medical Department.

Surgical treatment for the radical cure of hernia, when there is no strangulation or immediate demand for surgical interference, has not become an established custom among physicians. Temporizing means with the truss, in some one of the varied ingenious forms, is the usage, and this even when the opening is so large that the protruding part can not be retained by truss of any device during labor and changing positions.

It is the purpose of this paper to raise the question whether, with the improved methods in surgery at the present day, we should not advise, in certain cases, surgical treatment for radical cure. If so, in what cases and by what methods?

It is to be borne in mind that no method can be regarded as devoid of all danger, and that the patient will be willing to take certain chances in order to be free from the annoyance of truss and the possible danger from inflammation and strangulation at some unexpected time, and, because unexpected, accompanied with greater danger.

It is my conviction that more frequent resort to surgical means for radical cure is the duty of the surgeon to-day. It is my purpose, in attempting to sustain this conviction and also to point out the operation which I would advise, to report a case in detail.

A. B., aged 28, a German with regularity of habits and good constitution, came to me in July, 1885. He had scrotal hernia of both sides, the size of my fist, which he was unable to keep up with a truss; the openings were large, and any lifting or attempt at labor increased the size of the rupture very greatly. He was a single man, though he desired to marry, but in his present condition felt that he could not. He could not work with any comfort or safety, and under those conditions felt that life was without value to him.

After a careful examination of the case and consultation, I proposed the operation for the radical cure. I further concluded to operate upon both sides at the same operation. I was assisted by Dr. Dudley Allen, who also gave valuable counsel, and Dr. B. L. Millikin.

The operation consisted in shaving off the hair and bathing the surface cleanly and applying towels wet in a solution of bi-chloride of mercury, 1 per thousand, around the parts to be incised. An incision was made from the scrotum along the course of the cord up to the external ring. Dissections were made down to the sac, and its contents forced back into the abdomen; the sac was then drawn out of its position in the scrotum and clamped between the handles of dressing forceps, when the sac was cut off, leaving space between the stump of the sac and the forceps to stitch the edges together with a continued suture of fine silk, rendered aseptic by carbolic acid solution (1 to 20). Having thus effectually closed the stump, it was pushed back into the abdomen. The edges of the ring were made bare and five sutures, half an inch apart, were used for bringing them with adjacent areolar tissue together. The sutures were of silk, larger in size than that used for the neck, with the same aseptic precautions. In the same manner the deep fascia was brought together, and finally the integument and superficial fascia. The antiseptic care of cleanliness and mercuric bi-chloride (1 per 1000), was used, without the spray. Great care was taken to remove all lacerated tissue and coagula, and no drainage tube was used. The left side having thus been operated upon first, the right side was treated in the same manner. After the completion of the operation, the parts were thoroughly dusted with iodoform, antiseptic gauze was applied and absorbent cotton. The spica bandage was firmly applied, so as to offer support to the parts and keep the dressing firm.

The operation was made July 2, and the dressing left until the 14th. The first day after the operation, owing, it was thought, to accumulation of water in the bladder and flatus in the rectum, fever rose to 100°, but these conditions being relieved, the fever subsided and did not return during the course of recovery. Indeed, no unfavorable symptoms occurred, and when the dressing was removed,

twelve days after operation, the wounds were effectually closed without suppuration. The superficial stitches were removed. No unfavorable results occurred from the deep ones.

He left the hospital after about three weeks, perfectly cured. The operation was performed in July, 1885. I have heard from him since, and learn that he has no trouble whatever and no show of a return.

In this operation I claim nothing in the procedure as new, unless it is the clamping of the neck and removing the sac, and finally the use of the continued suture for the closure of the stump. By this method the peritoneal cavity is not opened at all so as to allow entrance of any septic material; thus, perhaps, the greatest danger in the operation is averted.

Indeed, from the facility of the operation, the ability to fully prepare the patient for the operation, and the absence of any unfavorable results, I feel impelled to urge the advisability of the operation, when before I had been very timid about such a procedure. I am satisfied that many men are enduring almost constant discomfort and danger where this operation, with the minimum risk, would offer complete recovery. I venture that most physicians in active practice have one or more victims with such hernias as render life hazardous and cause great suffering and care.

The various means resorted to in former years, as the use of the subcutaneous ligature, or needle, or injections, have been presented with earnest advocates and skillful efforts, but all have been found wanting, according to the verdict of the profession. In later years, what has been termed the open or direct method has been used, with more flattering promise, for the relief of a large class of sufferers.

Dr. Henry O. Marcy, of Boston, in a valuable paper before the American Medical Association, sets forth this method and its success in a very forcible way. His method differs from the one used by me in that he does not clamp the neck of the sac, thus effectually guarding against entrance of septic material into the peritoneal cavity; also in the use of animal fibre in each set of deep sutures. I regard the silk as an animal production, and when rendered aseptic it is preferable to any animal fibre, being more reliable for strength and less liable to loosen or slip.

Other operators in late years have advised the "open method."

Dr. John Woods' method, if fully understood by me, consists in an incision in the scrotum, by which operation the fundus of the sac is carried up into the ring and attached to its margin. The results, as given by him, are quite favorable, though the liability to recurrence, the cause of which is obvious, is a plea against its advisability. It seems to me to incur as much, or more, danger than the operation of Wutzer with the view of accomplishing very nearly the same results. In place of the scrotal incision Wutzer would use a staff for invaginating the sac, and that is armed with a needle and clamp, for fixing the fundus in the ring until adhesions are formed.

The operation by injection, as advocated by Heaton and Warren, of Boston, and revived by W. B. DeGarmo, is also doomed to failure. Though quite favorable statistics are given as to the results, and large expectations are raised, yet I am of the opinion that its adoption by the profession is not to be anticipated. It must be obvious, on a momentary reflection, that so long as the sac remains, or portions of it, there is a funnel-like gathering of peritoneum which favors the descent of the organ which acts upon it constantly like a wedge to reopen what may have been completely or partially closed. The subcutaneous methods generally may be regarded as failures, while they involve as much or more risk to the life of the patient.

I have operated by Heaton's method—injecting the fluid extract of quercus alba—several times, at first getting such indurations and adhesions as to give promise of cure, but after a time the induration disappeared and the protrusion returned as before. It is claimed by DeGarmo that the operation is absolutely without danger, but judging from my own experience and what I have observed from similar treatment by others, I am satisfied that this is an overstatement.

I have certainly seen one case which one or two years after the treatment, suffered from disease of the omentum with peritonitis and death, results almost beyond question of the treatment of femoral hernia by injection. In cases operated on by me symptoms supervened which put from my mind the idea of perfect safety after such treatment.

I am driven to the conclusion, that the direct open method is the only one that promises almost absolute guarantee of cure with the least possible danger. Besides, the whole procedure is rational and so perfectly under the supervision of the surgeon as to command considerate approval.

DISCUSSION.

Dr. R. H. Reed, Mansfield: It is pretty warm to talk on any subject this afternoon, but the subject is such an important one on account of so many people being afflicted with hernia, that I don't think this paper should be allowed to pass without something being said on the subject. This is especially so, when I tell you that we have had a man in our town who cures all these things in about two seconds, so he advertises; and I think we ought to discuss Dr. Herrick's paper at least.

It is true that the aid of a truss will give temporary relief, but no man is perfectly exempt from the serious results of hernia, even with a good truss. With the advantages we have of antiseptic surgery, lessening the danger of opening the peritoneal cavity, I do not see why some such plan cannot be resorted to, and many parties suffering from hernia be relieved with little or no danger. It is certainly less dangerous to open the peritoneal cavity and give the patient a radical cure, when there is no irritation, than it is where there is strangulated hernia, and we do not hesitate to do so, and we do not expect anything else but a cure, especially if the patient is taken in proper time, and why we should hesitate to perform this operation, when the percentage of mortality is so small, I cannot see any justifiable reason.

Dr. A. Dunlap, Springfield: I am very favorably impressed with the suggestions of Dr. Herrick as made to

us in his paper. He presents but one case, but states, however, that it was a successful operation for double hernia. We have been so accustomed to open the peritoneum lately that we do not think that there is very much danger about it. I have done it often under other circumstances, where I have had it laid open and cleansed out thoroughly and was not much afraid of it; but I have often thought about it in hernia when I saw a patient suffering from strangulation, when it was exceedingly doubtful whether the operation would be successful or not, and questioned whether or not the time hadn't passed when the operation should have been performed. But in others, when there was no real suffering, only an inconvenience merely, I have thought there was a very considerable degree of prospect of success in those cases. The plan of Dr. Herrick, of cutting down through and getting at the neck of the sac and then clamping it and closing it up before amputation of the sac, I think exceedingly favorably of, and if the opportunity comes, I shall perform the operation. Before, I have refused. I have no notion to leave the peritoneal sac open for the introduction of septic poison. There is a good deal of sepsis there. But—this closing of it up—there is one thing I would suggest to Dr. Herrick, and that is in tightening that clamp it must not be tightened only barely to hold it. If you tighten it down so as to pinch it, and then loosen the clamp, you may find that you have done serious damage to that peritoneum, and it may not be able to recover its circulation again. I think the paper is an admirable one. I think I shall try the operation. I would warn those who do try it not to keep the clamp there too long, nor too close, not to have it so tight as to completely destroy the circulation, because you may have a sloughing from the clamp, and then your patient is in a worse condition than if you had left it open. And the closing and sewing up

of the sac should be done as speedily as possible, so as not to interfere with the circulation too long.

DR. A. W. RIDENOUR, Massillon: I did not get in to hear the entire paper of the Doctor's, but simply a portion of it, but I was certainly interested in its discussion. I do not speak from experience in a large number of cases. I have had two of these cases of operation for the cure of hernia. I have not used the clamp. Dr. Morrisey, of Boston, has operated in two or three hundred of these cases and has not used the clamp. Dr. Weir, of New York, has also had remarkable success. The objection, perhaps the strongest, against the clamp, would be the fear of too much tissue destroyed. The method I adopt is this: I will describe my most recent case. It was last Monday. I operated on a little boy eight years old, who had a reducible hernia which couldn't be retained by any truss his father could get for him. The sac was not out. The hernia was reduced. The tunica vaginalis with the linings, open. The internal ring I freshened up with scissors, excluded the cord, twisting it and bound it, and that was the first suture. I left that in there. Then I put in at short intervals catgut sutures, leaving a portion of the tunica vaginalis, as we do in operating for a permanent cure of hydrocele. Then I freshened the two sides of the canal, making an almost continuous raw surface. I did not expect primary action in that case to effect a closure of the canal.

My rule formerly had been to fasten the omentum at the internal ring. That was a mistake. I now cut off the omentum, after tying the sac, cut it off and pass everything back in and close the ring and make it smooth as possible inside, so there is no chance for the bowels to impinge and separate the tissues. We know that no person who has a rupture has any peace. I speak from experience in this matter, for I have one. If I was sure I could have the operation performed—if I could perform it myself, on myself,

I would have it done. I have just that much faith in the radical operation for the cure of hernia. I have never had a failure. I have operated on a person as old as sixty-five years, when you could almost put your fist in the ring. If all these cases were not cured, they were greatly helped, and were able to hold it up; whereas, that couldn't be done before. The time to operate is in youth. Old ruptures you will benefit, but not cure. When we know of so many cases which are not being relieved by the best method of treatment with trusses, I say, when we can get an operation that promises well, we ought to practice it.

DR. HERRICK: I just want to add in this matter that I have practiced with other methods besides this, but this is the only one in which I have used clamping and the silk ligature. I met Dr. Morrisey last week, and mentioned it to him, and he thoroughly approved of it. I also recognize the objection that Dr. Dunlap speaks of. However, with proper precaution, I see no danger in that. I was so favorably impressed with this method, its simplicity and good results, that I could hardly help bringing it before this honorable body. Also the absence of the drainage tube—we are so in the habit of providing for that. I would not advise a drainage tube; I would leave the wound so perfectly clean as to be relieved of all danger of hemorrhage, or the necessity of a tube for drainage.

The Treatment of Retained Placenta After Abortion.

BY B. B. LOUGHEAD, M. D., RAVENNA.

The number of abortions in large cities is about equal to the number of labors at full term, according to Madam La Chapelle, Dr. Wm. H. Byford and others. It is impossible, however, to collect any accurate statistics regarding the number of abortions; many women passing through this accident without the help of a physician, and from the nature of the trouble, many patients desire to have their sickness ascribed to some other cause. That the number of abortions from all causes is very large, must be admitted by all physicians, who do a general business.

The mortality in abortions is another matter upon which no reliable data can be collected. Certain divorce-reform associations estimate that six thousand women perish annually from criminal abortions in the United States. Dr. Fordyce Barker considers that many more die from hemorrhage during abortion than from the same cause at full term delivery. It would probably be conceded by obstetricians, that many more die from septic causes following abortion than die from the same cause after child-birth. Now we know that about one woman perishes in every 200 to 250 births, and we may safely conclude that a much larger mortality exists in abortions, which are nearly as frequent as delivery at term. In 1883, there were 416 deaths in New York City from puerperal diseases. If even the same number died from the effects of abortions the mortality in the United States would be much above that estimated by the Divorce Societies. This mortality occurs in what have been well called, "incomplete abortions," that is, abortions in which some part, or all, of the secundines remain in utero, and for anatomical reasons this condition is most likely to occur during the third or fourth months of gestation.

The danger to the patient in these incomplete abortions, arises from three causes:

First—Hemorrhage. The fetus having escaped, an alarming hemorrhage is likely to occur from the open sinuses, where the placenta has become partially loosened from the uterine surface by the contractions, which have expelled the fetus. If the placenta becomes wholly detached, the hemorrhage speedily ceases, thrombi rapidly filling the mouths of the bleeding vessels, but if the placenta be only partly detached, the repeated contractions of the uterus in its efforts to throw it off, open anew the vessels and the patient suffers great loss of blood, and may even perish within a short time.

Second—Septic Infection. The placenta being wholly or partially detached, the patient not only suffers from repeated hemorrhage, but there will soon supervene septicemia from the rapidly decaying placental mass. This putrefactive solution occurs within a few days, at most, and is the means by which nature attempts to eliminate the mass from the uterine cavity. More or less absorption of this septic matter takes place, and chills, fever and sweats rapidly reduce the patient, already greatly prostrated by the loss of blood, which preceded this condition. If these suppurative changes do not take place, the placenta may become organized and remain in the uterus as a uterine polyp, which sooner or later will have to be removed by operation.

Third—Inflammation. This may occur as cellulitis, or as peritoneal, metro-peritoneal, or metritic inflammation. If the patient survives these dangers, she is likely to suffer from those chronic uterine troubles, which compel her to seek professional aid for relief.

There are two methods of treating retained placenta—first, expectantly, second, by immediate removal. The first method is the one taught in most of the text books, and can best be illustrated by a few quotations from standard works.

Meigs says in his work on obstetrics: "I am not disposed to deny that the presence of a putrefying substance, even of small size, in the womb, is capable of developing inflammation and fever." He also adds, "where the contents of the uterus are undergoing solution from putrefactive processes, I think there is no danger in leaving such occurrences to nature."

Keating says: "So long as there is any portion of that mass (placental mass) in utero, so long the woman is not safe from flooding, and so long she is liable also to other danger more remote, but by no means despicable." He goes on to say that unless the placenta is wholly, or in part within the vagina, hemorrhage must be averted by the use of the vaginal plug, and by the exhibition of ergot. This substantially leaves the woman to take her chances with the other and more remote dangers, which we may well believe were septicemia and inflammation.

Leishman's instructions are: "If the ovum has been expelled, and the os closes and the placenta retained, if the os is so contracted as to prevent the introduction of the finger, unless the hemorrhage is alarming, the safest course is to preserve an expectant attitude." "If attempts at removal fail, the only other recourse which remains to us, is in the use of ergot or some other oxytocic agent."

Playfair says: "The most troublesome cases are those in which the fetus is expelled and the placenta and membranes remain in utero. As long as this is the case the patient can never be considered safe from the occurrence of septicemia." But he recommends, as do the others, plugging the vagina and waiting.

Lusk says: "Cases of retained placenta treated by rest in bed, and cold cloths to abdomen and vulva, suffer considerable loss of blood, but most of them recover, though some may almost die."

King says: "Hemorrhage being excessive, our main and sure reliance is on the tampon."

Cazeaux advises the tampon and waiting, although he admits the danger of septic infection and hemorrhage, and illustrates the danger by a case which died of septicemia under the expectant treatment.

Quotations might be multiplied from various authors of works on obstetrics, and writers for medical and obstetrical journals advocating the same general line of treatment. The expectant method has been the method taught in books and colleges in the past, and I do not know of a text-book in use to-day that advocates the immediate and forcible, that is manual or instrumental, delivery of the imprisoned placenta. There are a few writers in medical journals who have protested against the expectant plan

and have advocated immediate operation in all cases where the natural forces do not expel the placenta. A very few quotations will illustrate the method they advise and use.

Dr. Fielding, an eminent obstetrician of Germany, says: "Where the membranes are broken when the physician arrives, he ought to proceed at once to the removal of the uterine contents."

Dr. Acken, in a paper read before the Washington, D. C., Obstetrical Society, said: "The treatment which gives the best results in such cases (retained placenta after abortions) is to empty the uterus as soon as possible, of all retained secundines."

Dr. P. F. Munde, editor of the *American Journal of Obstetrics*, in a paper upon this subject, says: "I wish to add my testimony in favor of the forcible (*i. e.* manual or instrumental) removal of the secundines immediately after the expulsion of the fetus in every case where the cervical canal is sufficiently patulous to permit the introduction of the finger, or dull curette, or placental forceps. Further, if there is hemorrhage, or if there is a chill, or an offensive vaginal discharge, or if the temperature rises, and the secundines are still retained, no matter how soon or how late after the expulsion of the fetus, they should be at once removed, and if necessary, the cervix should be dilated to facilitate the operation." Other quotations might be given, but are unnecessary, as the few given show the difference in the methods of treatment.

Now for a comparison of the two recognized methods of treatment. The advocates of the expectant plan admit the danger to the patient in every case where any part, or all, of the secundines are retained in utero. For hemorrhage, their reliance is upon the tampon and ergot. In my hands the tampon has proved a very doubtful hemostatic. In a passive hemorrhage it will check the flow, in an active hemorrhage it has but little effect. It checks the natural drainage of the uterine cavity, and increases the danger of septic infection. Where it does succeed in checking the flooding, it aids the detaching of the placenta by the resistance it offers to the uterine contractions, and thus, indirectly, may do much toward relieving the danger of flooding. The administration of ergot, in these cases, is very likely to provoke hemorrhage where it would not

occur if the ergot were not given. The very contractions which it excites, loosen the thombi formed in the vessels, and bring on anew a hemorrhage which had subsided. Thus the use of ergot in these cases will often defeat the purpose for which it is given.

These methods of controlling hemorrhage are questionable methods, for if they avert the immediate danger from loss of blood, they increase the danger of septicemia, the tampon by stopping the natural drainage of the uterus and the ergot by closing the internal os, and making removal of the secundines, even when their presence in the uterus endangers life, more difficult. The argument that authors and followers of the expectant treatment advance most frequently, is that the process should be left to nature, and that interference with nature is disastrous. But the premises of such a proposition are incorrect, for they presuppose that the process of abortion is a natural one, whereas it is always pathological. If a placenta at term were adherent or retained by an hour-glass contraction, should it be left to natural processes, *i. e.* to rot away? The analogy is similar, the function of the placenta in both cases is completed, and its removal with safety is the only thing to be done.

The only rational treatment of these cases is to remove the secundines. The danger in the forcible removal of them lies only in the possible injury that may occur in the manipulation. It has been suggested that the uterus may be perforated. That could only happen with most bungling force being used. Slight lacerations of the endometrium might occur, but if proper anti-septic measures be used, these abrasions are no more dangerous than at full time delivery.

The best time to accomplish the removal of the secundines, is when the uterus is dilated by the expulsion of the fetus. At this time the cervix is very dilatable, and an operation can best be done. The patient is not weakened by hemorrhage or fever, and can best withstand any shock that she may suffer from the operation. In the large majority of cases there is nothing gained by delay, until fever, chill, or hemorrhage compels action.

How shall the work be done? My own plan is as follows: Place the woman across the bed with her hips near

the edge, then with one hand externally, and one or more fingers within the uterus, attempt to separate the placenta from its uterine attachments. The hand upon the outside should not be simply over the abdomen, but should grasp the uterus from above and behind, and force it down upon the examining fingers. In the majority of women who have borne children, this means can be successfully used. It is said that the uterus cannot be forced down low enough to reach the uterine cavity, but we often draw the uterus down to the vulva in operations, and no harm results.

If the uterus cannot be entered by the finger, because of closure of the internal os, then dilatation must be made. The finger firmly and persistently used makes a good dilator. The steel dilators are the next best, and a tupelo tent the next. If the tent is used, some little time must be allowed for dilatation. I have always suc ceeded in forcing my finger through. If instruments are necessary, those recommended by Munde are perhaps the best. The wire curette is a safe and efficient agent to use, and one with which harm can hardly be done. The curette should be gently introduced, and with one hand steadying the uterus on the outside portions of the placenta can be detached, and then removed with the placental forceps. Since adopting this plan I have never been compelled to use instruments, but have been compelled to pass four fingers into the vagina, where I could not reach the fundus without. By determination and persistence the work can usually be accomplished without instruments.

The after treatment consists in swabbing the uterine cavity with tincture of iodine immediately, as an antiseptic precaution, and to insure against hemorrhage, or in a hot uterine douche of carbolized water. Either of these means is safe and efficient, and one application is usually sufficient.

Allow me to say in closing, that I do not expect any physician who has practiced the expectant method thirty or forty years with reasonable success, will change at this date. I tried the expectant plan and was not satisfied with it. I had the success that all have, *i. e.*, some cases of fearful hemorrhage, of septicemia, of inflammation. I treated my patients who thus suffered, for subinvolution,

hyperplasia uteri, chronic endometritis. I believe these conditions were not the result of abortions, but were the result of the method of treating abortions. I sought for a better method, and I believe the active plan safer and more satisfactory, both to patient and physician.

The Management of Persistent Uterine Hemorrhages.

BY A. B. CARPENTER, M. D., CLEVELAND.

It is not the purpose of this paper to deal with the pathology, or the medical treatment of persistent uterine hemorrhages, but to call attention briefly to the exploratory plan and method as desirable in a class of cases which seem to have defied the medical treatment usually given. Uterine polypi, fungoid endometritis, the blighted ovum, or a retained bit of living placenta, are among the special conditions to which it is our purpose to call attention. It is evident that the presence of any one of these conditions will defy almost completely uterine therapeutics, and lead the patient a life of misery, discomfort, and danger.

The uterine sound will be our guide in many cases as to the necessity of exploratory treatment, although it will sometimes fail; but, as a general rule, persistent flooding, where the canal measures over three and one-quarter inches, will be found to defy therapeutical measures. If the canal is open, as in many cases of endometritis, an intra-uterine application of iodine, carbolic acid, and especially lactic acid, will remedy this difficulty; but should the hemorrhage still persist, the curette will be our resort.

I would here call attention to the properties of lactic acid. It has no action upon healthy mucous membrane, but fungoid or sloughing tissue it quickly attacks and rapidly destroys, leaving a healthy appearing surface, which tends to rapidly granulate and heal. It is not so irritating as some of the older remedies, and is a valuable application; it is to be applied twice a week, in the chemically pure form.

As to the contra-indications to an exploration of the uterine canal, nearly the same rules apply as to the use of the sound, but contra-indications being absent, and the ordinary methods and forms of treatment having been

made use of, it is not only proper but it is demanded that we proceed to explore the cavity.

As to the best method of dilating the canal, there seems to me but little choice. While there are some who still advocate the use of the tent, the growing verdict seems to be that tents have had their day; therefore, they will not be considered as a desirable method. There are as many forms of uterine dilators as there are works on diseases of women, and all possess more or less merit. Attention, however, will be called specially to Hegar's hard rubber dilators. These are smooth and polished, slightly curved, and run in numbers from 1 to 36; they are easily introduced, and appear to cause comparatively few bad results. They are strongly disapproved of by some, but nearly all the dissenting voices are found at the same time advocating the instruments devised by themselves.

To use Hegar's dilators, the patient should be anesthetized and placed upon the back or side, and the vagina should be made aseptic by a solution of 1-500 bi-chloride; then hook the cervix well down and begin with the lowest number that can easily be introduced; leave this in place for a moment, then withdraw and follow with the next size, and so on until the canal is large enough to permit of the examination.

If a polypus or a sub-mucous fibroid is suspected, dilatation will have to be carried on up to the large numbers so as to permit the index finger to be introduced into the cavity. In all cases we are justified in making the exploration only after a careful examination which results in a strong probability that we have some intra-uterine complication to contend with. In this case we should not allow our patient to go on bleeding indefinitely without giving her the benefit of this exploratory form of treatment.

After dilatation has been carried on sufficiently to admit the introduction of the index finger into the canal, what may we find there to explain the cause of the bleeding? We may find simply subinvolution, with an aggravated form of fungoid endometritis. In this case recourse to the curette, followed by the application of tincture of iodine, will ordinarily effect a cure.

We may find a polypus growing from any locality within

the canal; in this case the wire of the ecraseur will remove the difficulty.

We may find a blighted ovum, the so-called fleshy mole, or a portion of a retained placenta; in this case, as in the first, the curette will bring relief.

A sub-mucous fibroid may be found bulging into the canal; this is removed by introducing a blunt-pointed bistory and cutting the capsule and enucleating the tumor; but should the fibroid prove to be of the interstitial variety, then we shall have a formidable complication to deal with in so far as permanently checking the flooding is concerned.

It is not our purpose to go into the treatment of hemorrhages resulting from interstitial fibromata, and will only say that if the flooding does not threaten the life of the patient, we should carry her on to the menopause as best we can; but should our patient be in danger of bleeding to death, removal of the ovaries, or supra-vaginal hysterectomy, will be our course. When we find the cause of the hemorrhage to be an interstitial fibroma, about the only encouragement we can give our patient is that with the menopause will come relief, and that her trouble torments but, as a rule, does not kill.

The report of a few cases will, perhaps, best serve to illustrate my point, viz: The necessity of exploring the uterine cavity in cases where the flooding is persistent, or uncontrollable.

CASE I. Louisa B., single, 38 years; menses began at 13, regular up to three years ago; flow usually lasted five days without pain. For two years past the flow has been increasing and pain in back has been severe, the period now lasting twelve to fifteen days with great loss, the patient being unfitted for her work—that of teaching; she has taken the usual remedies, including ergot in large doses with no effect. I first saw the case March 3d, and found upon introducing the sound that the canal was over three inches in length. As she had never been pregnant, I at once suspected intra-uterine difficulty, and the uterus was accordingly dilated. A small polypus, the size of a walnut, was discovered growing near the fundus; this was removed, and she has now passed several periods since the operation without trouble.

CASE 2. Mrs. O., age 24, married eight years, one child four years old, no abortions. Patient gave a history of profuse floodings for the past two years, great pain in back, and bearing-down pain, bowels confined; for the past year has been unwell nearly three weeks out of the month. The sound gave a measurement of three and one-half inches; having had no abortions, and only one child, I looked upon the case as one of probable polypus or fibroid, but upon examination only an aggravated case of fungoid endometritis was found. With the curette I removed a quantity of fungoid material, and the metrorrhagia has since entirely ceased.

CASE 3. Mrs G., age 29, seven children, two abortions; patient stated that she had had a miscarriage fourteen days before, at three and one-half months; that everything came away, but that she had had profuse flooding for the past forty-eight hours. On examination the uterus was found four and one-half inches long and retroverted. Being misled by the statement of the nurse that everything came away all right at the time of the miscarriage, I prescribed fifteen drops of ergot every hour, and placed a tampon in the vagina. A few hours later a message was received that the patient was bleeding to death; I secured aid, and went in haste, prepared to go into the uterine cavity. This was readily accomplished, and a piece of placenta was removed by the curette from near the fundus. The curetting was followed by a 1-500 irrigation of bi-chloride, and the patient lost no more blood and in a fortnight was well.

This woman would no doubt have died without the aid of this exploratory treatment, and in cases 1 and 2 their sufferings would have continued under the use of therapeutic remedies.

In closing I beg to submit the following propositions:

First—That, after a reasonable trial, we are not justified in allowing a patient having profuse floodings to go on with the simple use of drugs, but should insist upon a careful examination with a view to ascertaining whether there is not some intra-uterine trouble.

Second—That if we find upon this examination a probability that such a state of affairs exist, then we should take steps to dilate the canal.

Third—That Hegar's dilators are quite easily introduced, and when properly used, are comparatively free from danger.

Fourth—That their proper use consists in first irrigating the vagina with 1-5000 bi-chloride before the operation, and then irrigation of the uterine cavity with the same solution after the operation is finished.

Fifth—That by this form of treatment we may afford permanent relief to a class of cases afflicted with these profuse floodings which, for years, have rendered the patients miserable, and life a burden.

VAGINAL HYSTERECTOMY.

BY THAD. A. REAMY, M. D., CINCINNATI.

Professor of Clinical Gynecology, Medical College of Ohio. Gynecologist to the Cincinnati Hospital, and to the Good Samaritan Hospital.

On two different occasions—the last in my address before the American Gynecological Society in Baltimore—in discussing vaginal hysterectomy for malignant disease, I expressed the conviction that the operation is justifiable only in cases where the disease is limited to the body of the uterus, the cervix and vagina remaining unaffected.

The continued decrease in the mortality of the procedure, as shown especially by the statistics of German operators, with the improved technique developed by later experiences, have led me to the belief that it is my duty to give the operation a fair trial in my own practice. The limited experience furnished me leads to the opinion that some of the most favorable cases will be found to be those where the disease is confined to the cervix. In my estimate, therefore, of suitable cases, I was in error.

The following cases include my entire experience. And it must be confessed that the time since these operations were done is too short for any final conclusions as to cure; still, it is my belief that a brief report of the cases will be suggestive of profitable discussion.

CASE I.

Mrs. M., of Ohio, was sent to consult me November 8, 1885, by Dr. Halderman, of Columbus. She was 37 years old, a widow, the mother of children. Although anemic, her general health was fair and nutrition good. There was well-marked cachexia. She had extensive cancer of the uterus; the infra-vaginal portion of the cervix was entirely absent, the result of disease and of an operation by Dr. H. The vaginal walls were extensively diseased about the cervical stump, and cancerous infiltration could be detected in different directions more deeply situated.

She was told that any operative procedure was decidedly

contra-indicated, and she was sent home, although clamoring for the removal of the entire uterus, which I declined to do. She returned December 24, and begged for the slender chance offered by vaginal hysterectomy, and her friends joined in her plea. Again I refused to interfere and she went home. She returned in a week and would not longer be refused. I told her that the operation would almost surely fail to remove all disease; that it would be long, tedious and dangerous, and that there was great danger of death on the table.

I well remember her reply to these statements: "I will have the operation. I would rather be a star in a tragedy than suffer a torturing death from cancer."

Against my judgment, I yielded to her constant importunity, and removed the uterus, by Schroeder's method, on January 19, 1886, at the Good Samaritan Hospital, with the advice and assistance of Dr. Halderman. Drs. E. W. Mitchell and Withrow and the house physicians were present and assisted in the operation.

It was a desperate and perilous undertaking. There was no great difficulty in getting the uterus out, but the diseased condition of the parametrium prevented safe ligation; the ligatures would cut and slip and the vessels bleed, so that again and again I was driven farther out toward the pelvic walls. The operation lasted more than four hours, and when it ended none could doubt its issue.

She rallied but slowly from the anesthetic, and never fully from the shock. Death occurred forty-nine hours after the operation closed.

Her heroism deserved a different issue, although all reason forbade indulgence in such a hope. Never will I again be persuaded by a patient to operate so thoroughly against my judgment.

CASE II.

Mrs. G., of Indiana, consulted me in March, 1886, giving at that time the following clinical history:

She was 55 years old, the mother of one child born twenty-two years ago, and had been a widow for three years. She had passed the menopause at the age of fifty. During her menstrual life the periods had been regular, rather free discharge, the inter-menstrual period three weeks.

After the menopause her health remained perfect for nearly three years, when she began to have rather free uterine hemorrhage, which had persisted in spite of all treatment, including the curette.

The discharge was chiefly blood without much mucus or serum, and no pus had ever been noticed.

I curetted the uterus thoroughly and swabbed out its interior with comp. tr. iodine and carbolic acid. For a very short time the hemorrhage ceased but recurred in much the same amount and character as before about a month after the treatment. The products of the curetting at this time would have filled a tablespoon, and consisted of grayish gelatinous bodies bathed in blood more or less clotted. These bodies varied in size from a wheat grain to a large pea, and as they did not differ in appearance from the usual products of the curette in fungous endometritis, they were not subjected to microscopic examination.

The patient returned to her home and did not come to my notice until October, 1886, when she consulted Dr. Taylor, of Price Hill, Cincinnati, who brought her to consult me concerning the discharge, which was still unabated. It now consisted mainly of blood, as before, but for the past few weeks it had taken on a very foul odor. She was also less vigorous in her general health and her appearance was beginning to suggest malignant disease.

Careful examination did not elicit much enlargement of the uterus, which was freely movable, with a perfectly healthy cervix.

In the presence of the class of the Medical College of Ohio, at the Good Samaritan Hospital, I introduced a blunt wire curette, but the friable condition of the uterine walls led me to abandon the proposed curetting. It was manifest that there was danger of tearing through the uterine walls. The odor was very foul and the grayish gelatinous bodies were larger and softer than before. The endometrium was again treated with compound tincture of iodine and carbolic acid.

I was now of the opinion that the body of the uterus was certainly the seat of malignant disease of some character. She was kept quiet until all possible danger from the curetting had passed and in the meantime tonics were exhibited. Antiseptic vaginal injections were employed.

daily to correct the fetor of the discharge, which continued profuse, foul and bloody. Six weeks after the last employment of the curette I decided to remove the entire uterus, although the cervix remained perfectly healthy; also the vagina.

There was evident cachexia but no indication whatever of any metastasis, although the patient began during early November to complain of rather constant pelvic pain.

November 9, she was placed under ether and in the lithotomy position, and the uterus removed. Drs. W. L. Taylor, Withrow, Bonifield and the house physicians of the Good Samaritan Hospital were present and rendered the necessary assistance. In the main the method of Fritsch, of Breslau, was followed in the operation. Briefly, the method is as follows:

The vaginal vault is first incised on both sides, with scissors. Then ligatures are carried deeply and tied, when the uterine lateral attachments are severed; then the organ is drawn down by a vulsellum, when the uterus and bladder are separated cautiously. Now the peritoneal cavity is opened; a sponge, with long wire attached, is carried through the opening, and prevents descent of the small intestines. The fundus of the uterus is now seized, the organ anteverted and strong ligatures carried around the broad ligaments and firmly tied, then the broad ligaments are cut through. Finally, with a straight needle, a ligature is carried from the anterior vaginal wall through the recto-uterine peritoneal fold, which, being transfixed, is now cut.

In this case the peritoneum was carefully stitched to the upper end of the vigina; the ligatures were left long. The vagina was washed out with a solution of corrosive sublimate, 1 to 2,000.

An iodoform tampon was placed in the vagina. The stumps of the broad ligaments, as will be noticed, were left free. No hemorrhage followed.

The operation occupied an hour and a half. The patient reacted promptly and did well until the third day, when her temperature went up to 103° and her pulse to 140. The iodoform tampon was at once removed and the vagina washed out, when the temperature fell and the pulse slowed. After this time, daily vaginal irrigation was practiced for removing the vaginal discharge, which was now somewhat

purulent though not fetid. Nothing untoward then occurred until the sixth day, when a rise of temperature was subdued by the removal of some of the ligatures which had become loose.

Her recovery from this time was rapid, although the last ligature had to be cut away on the 21st day.

THE SPECIMEN.

Macroscopic examination of the uterus showed that the disease had attacked the entire endometrium, while the anterior wall was in one place quite deeply invaded. The organ weighed four ounces and its entire peritoneal surface was perfectly healthy.

A microscopic examination made by Dr. French, Demonstrator of Pathology in the Medical College of Ohio, showed a typical villous degeneration of the endometrium, apparently of the rare variety reported by Goodell (*Lessons in Gynecology*, p. 207) Lusk (*Amer. Jour. Obstet.*, vol. XI, p. 132), Bertole (Phila. *Med. Times*, 1878, p. 354), MacCallum (*Trans. London Obstet. Soc.*, 1882, p. 37).

This patient remained perfectly well and constantly improved in health until last March, when she again consulted me for a vaginal discharge of purulent character and foul odor. An examination disclosed suspicious induration in the vaginal roof. She is now in the Cincinnati Hospital, failing rapidly; the whole vaginal roof and peritoneum are invaded. She will not survive six months.

Thus, in a case which seemed most favorable for the operation, and in which the operation was done without difficulty, followed by a prompt recovery from the operation, there was return of the disease in a little more than four months—certainly not strong testimony in favor of the procedure.

CASE III.

I was called to see Mrs. T. in consultation with her family physician, Dr. Topmeller, of Bank street, Cincinnati.

She was 60 years old, the mother of six children, the youngest aged 22 years. She had never suffered a miscarriage. She began to menstruate at 18, and maintained the function regularly, both in frequency and amount, until she was 55 years old. Before, as well as after the

menopause, she had perfect health and possessed unusual vigor.

Four years after she ceased menstruation, at the age of 59, in November, 1885, she first noticed a slight discharge of blood. This continued and increased until June, 1886, when cancer was diagnosed by her family physician, and an immediate operation urged. This was refused, and the discharge becoming so profuse as to cause constitutional symptons, though not marked cachexia, she consulted Dr. Topmeller in January, 1887. He confirmed the previous diagnosis and strongly urged operation.

At this time I found the cervix entirely implicated as far as the vaginal vault in each direction. Anteriorly, the disease had wholly destroyed all tissue up to the bladder. The disease had not invaded the parametrium, so far as could be determined, except to a slight extent between the uterus and bladder. The uterus was normally mobile.

She consented to an operation which was advised, and I removed the uterus by Fritsch's method on January 27, 1887, Drs. Topmeller, Withrow, Bonifield and E. W Mitchell assisting.

In this case, notwithstanding a staff was kept in the bladder as a guide, that viscus was opened in the effort to remove all the disease anteriorly, and the opening closed with silver wire after the uterus was removed. In making the traction upon the uterus required in ligating the broad ligaments, the vulsellum tore into the uterine cavity, and fully an ounce of fetid pus escaped. This pus was not freed by the introductlon of the sound, and its presence was both unusual and unsuspected, although in two cases previously of uterine cancer I had found the uterine cavity full of pus above the limit of disease.

In anteverting the uterus both ovaries prolapsed and were removed. The peritoneum was not stitched to the vagina, the broad ligaments being left free. The intestines were retained by the sponges and gave no trouble.

She made an excellent recovery, her temperature never going above 101°, and coming to normal on the seventh day. The ligatures all sloughed but three, which were cut away on the twenty-seventh day.

There was partial union only of the vesical rent, and a fistula remained which was closed with silver wire a few

days ago with every prospect, at present, of success. It is now nearly six months since the uterus was removed, and the most careful examination fails to reveal a single vestige of disease.

CASE IV.

Mrs. A. consulted me in the latter part of March, 1887. at the instance of Dr. Douglas Schoolfield, of Bellevue, Ky. She was but 22 years old, married at the age of 16, no children, no miscarriages. Menstruatiou began at the age of 14, and was regular and painless until four months previous, when the flow became greatly increased and the inter-menstrual period shorter. She was treated for "ulceration of the womb," from the beginning of the trouble until March 20, by a so-called specialist, but getting constantly worse she consulted Dr. Schoolfield, who at once diagnosed extensive epithelioma of the cervix.

Although slightly anemic she was otherwise in good general health, and presented no cachexia and no history of specific disease.

An examination disclosed epitheliomatous disease of the entire infra-vaginal portion of the cervix, bleeding freely upon the slightest manipulation. The disease did not reach the vaginal roof or the parametrial tissues, as was evinced by the free mobility of the uterus, but had extended well up into the supra-vaginal cervix.

Immediate vaginal extirpation of the uterus was advised. Accordingly, March 30th, the uterus was removed per vagina by Fritsch's method, Drs. Douglas and C. B. Schoolfield, Withrow and Bonifield assisting. The vagina being narrow the perineum was divided and united with sutures of silk-worm gut after the uterus was removed, securing complete union by first intention. No trouble was experienced from the intestines, and as the ovaries did not appear, when the uterus was anteverted and drawn down, they were undisturbed. The ends of the broad ligament were left free and uncovered and no stitches were taken in the vaginal roof. A tampon of cotton saturated with iodoform was placed in the vagina.

Time of operation, one hour and thirty minutes. After a prompt rally from the ether she complained of severe pain in the abdomen, which increased to such an extent

that morphia was given hypodermically four times during the first twenty-four hours.

Some tympanites appeared on the second day, but free purgation with sulphate of magnesia removed it. Her temperature went up to 104° eight hours after the operation, but went down to 101° on the second day, and became normal on the sixth day. After the third day the vaginal douch was freely employed, and all the ligatures gradually sloughed away except two, one on each side, enclosing the apices of the broad ligaments. These were cut away on the 16th day.

She was out of bed on the 20th day, walking to my office at the end of the fourth week, and is now apparently in perfect health.

In view of her youth, however, I shall not be surprised at an early recurrence of the disease. Clinical observation has convinced me that a woman at the age of 50 and beyond, *ceteris paribus*, is infinitely more likely to escape a recurrence of the disease after removal of cancer of the cervix than a woman who is but 30 years of age. The malignancy of the disease is in inverse proportion to the age of the subject.

The above fact, which is sustained by the experience of other clinicians, is full of interest, and may be regarded as an important factor in prognosis.

CASE V.

I was consulted a month since by Mrs. W., the wife of a prominent citizen of Cincinnati. Age 36, mother of four children, youngest about two years old. She was apparently in perfect health and nutrition. Careful inspection, however, revealed in her complexion slight cachexia. Four months ago she consulted her family physician, Dr. Goode, because she was suffering from hemorrhage from the vagina, which was at times profuse. Astringent injections were ordered, with the internal exhibition of ergot.

Improvement not following, Dr. G. urged a vaginal examination, which on grounds of delicacy was denied him, and which request being repeated some weeks subsequently and again refused, the Doctor ceased attendance, but his remedies were continued. When I saw the patient

an examination disclosed carcinoma of the entire vaginal portion of the cervix, breaking down of structure well advanced. No disease of vagina and no enlarged glands detected. Uterus slightly mobile, enlarged.

Vaginal hysterectomy by Fritsch's method last Thursday (June 9). Ether by Dr. Chas. L. Bonifield, Drs. Goode, Withrow and Wilder assisting me in the operation. Drawing the uterus down proved unusually difficult, because the disease had invaded both cervix and corpus, with perimetrial and adjacent tissue. And then the structure of the uterus was so softened and friable as to tear upon slight traction with the vulsella. The extent of the disease was much greater than could be anticipated by the most careful examination. The variety of cancer here was probably medullary, its malignancy therefore very great. Time of operation one hour and thirty minutes.

The patient is doing well. Her temperature was yesterday 99.6°, pulse 98.

REMARKS.

Vaginal hysterectomy for malignant disease of the uterus is becoming gradually established as a legitimate procedure. The opposition at first encountered is being silenced by its later results. Although cancer of the uterus is an incurable disease by any other method than removal, yet Freund's operation followed by a mortality of 72 per cent., was speedily rejected by gynecological surgeons.

An operation which only saved 28 per cent. of its subjects, even in a disease where death is the universal issue, could only have a brief career in surgery, especially since those who recovered from the operation could not be assured of future immunity from the disease. Hence Freund's operation, after a short life and a fair trial, was abandoned.

Even before this method of removal had been condemned by its excessive mortality the operation of extirpation per vaginam was suggested and performed. During its early history, 1880, in a total of 30 operations, the mortality was 37 per cent., only a little more than half the death rate from Freund's method during its entire existence.

Notwithstanding the great advantage secured by the

vaginal method at the very outset, it was nowhere received with favor except in Germany. A mortality of 37 per cent. was too high for an operation which did not insure permanent relief, and the length of time before the disease relapsed was yet undetermined.

The following years, 1881 and 1882, the mortality decreased to 31 and 29 per cent. respectively, and the opponents became more lenient in their objection, and less pronounced in their condemnation. As a result, the operation was essayed in a few instances by surgeons in England and America, and the mortality, even with a greatly increased number of operations, was only 20 per cent. at the end of 1883.

The operation was now fairly on trial and was accorded rather general approval. In 1884 there was at least agreement on the part of authorities that the history of the operation justified a more general trial of its possibilities before the tribunal of experience.

As an instance of the change of opinion upon this subject in this country, when Reeves Jackson read his very able paper on Kolpo-hysterectomy before the American Gynecological Society, in September, 1883, his position of decided opposition met with almost universal accord.

In September, 1884, at the next meeting of the society, a very valuable paper was read upon the opposite side by Dr. Paul F. Munde, and this in turn met with an equally general consensus of support, Jackson and the writer still opposing, however. A most remarkable conversion on such an important question in a single year, especially when the mortality of the operation as stated in these two papers only differs by one per cent.

In 1884-85, two years, according to the statistics of Dr. Sara Post, (1) there were 123 operations performed or reported with a mortality of twenty-four per cent. Of these, thirty-five were performed during that time with a mortality of only eleven per cent.

I have collected in the accompanying table most of the operations performed or reported since the beginning of 1886, the time of the publication of Dr. Post's statistics,

2 *Amer. Jour. Med. Sciences*, Jan. 1886.

and therefore not included in her collection. Individual operators were not written to; there are, therefore, doubtless several cases not included in this table, but it is not likely that general results will be much changed when they are in.

STATISTICS OF VAGINAL HYSTERECTOMY FOR CANCER. OPERATIONS MADE OR REPORTED SINCE JANUARY 1ST, 1886, AND NOT INCLUDED IN DR. SARA POST'S PAPER.

OPERATOR.	CASES.	DEATHS,	RECOVERIES.	WHERE REPORTED.
Brennecke	18	3	15	*Ztschr. f. Geb. und Gyn.*, Heft 1, Bd. xii.
Goodell	1	0	1	*Am. Jour. Obst.*, p. 836, 1886.
Leopold	38	2	36	*Am. Jour. Obst.*, p. 918, 1886.
Battlehner	9	1	8	*Am. Jour. Obst.*, p. 199, 1886.
Fritsch	36	5	31	*Archiv. fur Gyn.*, Bd. XXIX, p. 359.
Schultz	9	2	7	*Am. Jour. Obst.*, p. 220, 1887.
Munde	2	0	2	*Am. Jour. Obst.*, p. 520, 1887.
Ill	1	0	1	*N. Y. Med. Jour.*, p. 183, vol. xliii.
Grieg Smith	1	0	1	*Lond. Lancet*, Jan. 1, 1887.
Stirling	1	0	1	*Brit. Med. Jour.*, p. 1096, vol. 1, 1887.
Schmidt (Cologne)	1	0	1	*Munch. Med. Woch.*, No. 33, 1886.
Purcell	3	0	3	*Brit. Med. Jour.*, p. 679, vol. 1. 1887.
Antona	6	2	4	*Lond. Lancet*, vol. 1, p. 221, 1887.
Staude	4	0	4	*Lond. Lancet*, vol. 1, p. 683, 1887.
Jennings	1	0	1	*Lond. Lancet*, vol. 1, p. 682, 1886.
Nairne	1	0	1	*Brit. Med. Jour.*, vol. 1, p. 513, 1886.
Reamy	5	1	4	*Cin. Lancet-Clinic*, July 16, 1887.
Totals	137	16	121	

Thus out of a total of 137 cases, there were sixteen deaths, a mortality of only a fraction above eleven per cent.

Adding these results to those of Dr. Post, gives a total of 478 cases with 109 deaths, a mortality of 23 per cent. for the operation from the beginning of 1880 up to the present time.

When we consider that the mortality for the past year and a half is only eleven per cent., we may with safety conclude that the most important objection to the operation

is answered. A mortality of eleven per cent. which further experience and improvement in details may be confidently expected to decrease, is not by any means an insuperable objection. The disease for which it is performed is universally fatal, and when so far advanced as to demand vaginal hysterectomy it is rapidly so. Just how long a patient will live after she has reached the point where this operation is indicated, and a less radical procedure is hopeless, is uncertain. Further, carefully conducted clinical observations must elucidate this important problem.

A most vital question in this connection is: Is immunity from disease and the prolongation of life after the operation shown to be a positive gain when we consider first, the average life-history of the disease unmolested, and second, the mortality due to the operation alone.

My own experience in this field is too limited and recent to be valuable, and in the table of cases reported above, data are insufficient to warrant an answer to this important question of recurrence, and I therefore submit the statistics of Dr. Post upon this subject.

"Of 137 operations done before 1883, 97 were successful, and of these 97, 18 were known to have been well at the end of two years." Here was an aggregate immunity of 36 years from a part of the recovered cases, and dividing this time alone by 40, the number who died, gives about ten months as the average time these should have lived to compensate the gain. If, however, only 11 per cent. of the 137 cases had died, there would have been but 15 deaths, and these should have survived an average of nearly two and a half years, which is far above the natural expectancy of the disease at the stage justifying this operation.

Again: in the report of Fritsch, who has made the operation in all 60 times with 7 deaths, just about the same mortality (11 per cent.) shown in all reported cases since January, 1886, he states that of the 53 survivors, 20 remained healthy; 2 after 3 years, 7 after 2 years, 8 after one year, and 3 after ten months; an aggregate of 30 years of immunity. This period represents more than four years each to the seven who died, which is manifestly much longer than they would have lived untreated. In-

complete as such statistics are, they certainly show that the operation prolongs life on the average, and is, therefore, apparently justifiable.

Another question should, however, be raised here, one which is, to my mind, of the greatest importance in considering the justifiability of hysterectomy for cancer, notwithstanding the favorable showing of the statistics.

I refer to the uncertainty of diagnosis as to the extent of the disease in cases where the uterus has been removed, and I raise the inquiry whether in many of these cases a high amputation as practiced successfully in many cases by myself, or the well known brilliant operation of Baker of Boston, would not have removed all the disease, with far less danger from the operation direct, and leaving the recovered patient in a better condition. In two of my own cases where amputation by the swallow fork method was done as high up as the os internum, conception and safe delivery occurred subsequently.

Of course, if a high amputation will cure, a successful vaginal hysterectomy will do likewise, but might not many of the cases in which hysterectomy has apparently cured, have been as thoroughly cured by the less radical measures?

On the other hand, we can not determine, though the inquiry is certainly pertinent, whether or not the cases where, after a successful removal of the uterus, and the disease quickly returns life has been shortened by the interference.

It is common knowledge among clinicians that when cancer returns quickly to the seat of partial removal its malignancy is increased and its devastation more rapid on account of the interference.

In other words, I would raise the question, will any operation remove all the disease in a case where it has extended so far as to be beyond the reach of a high amputation or a Baker's operation?

If the parimetrial tissues and the vaginal attachments of the uterus are invaded, they can be almost as thoroughly removed by Baker's method as by hysterectomy, and if the disease is beyond the field of the less radical procedure, I am not sure but that such metastasis as precludes the possibility of cure has already occurred.

These questions are not answered, and until they are, I

must enroll myself among those who exclaim, "I believe, help thou mine unbelief."

In cases of primary cancer of the body of the uterus, of course the only method of procedure offering prospect of cure is hysterectomy. Such cases, fortunately, are of extreme rarity. It does not occur in more than one per cent. of all cases of cancer of the uterus. My experience in the case of this variety reported above would rather justify skepticism upon the advisability of hysterectomy even where the disease was confined to the body of the uterus.

Kolpo-hysterectomy is a very difficult operation, probably none more so in the whole field of gynecology. It requires special skill in its performance, and the determination of the proper cases for its employment requires diagnostic ability of the highest order.

These facts will and should restrict the general adoption of the operation by the profession.

The difficulty in the diagnosis and in the proper comprehension of the conditions indicating the operation is a formidable one. In general terms the operation is said to be indicated when the disease is confined to the uterine body, or when the cervix is so extensively implicated as to render a high amputation insufficient, and the uterus is freely mobile.

But who can say when this latter condition exists?

We all fail to determine the limit of disease, even when the patient is under an anesthetic, and the tissues under both eye and finger, otherwise when we believe the disease all removed it would not recur, as it too frequently does.

How much greater the difficulty when only the finger makes search through intact vaginal walls.

In conclusion, as the disease for which the operation is made is fatal in all cases, and since the mortality of the operation is but 11 per cent., and since unquestionably some cases can be cured by the operation which are not curable by any other known method, therefore in properly selected cases the operation is justifiable.

I hope the gentlemen present who have views on the subject will not hesitate to express them. I make this request (rather an unusual one, it might seem) because of the well-known fact that in Germany this operation is so rapidly gaining reputation that a distinguished German surgeon practicing gynecological surgery who refused to perform the operation would be considered strange, and because the operation has been so much more frequently performed in Germany than in any other country, and has been done until recently so very little in England and so little in our own country, that it really becomes the duty of American surgeons to investigate the operation and to give it a test. I really hope, therefore, that the subject will be discussed, in view of the few cases that have been reported by American surgeons in the very brief time that has elapsed since the meeting of the American Gynecological Society.

DISCUSSION.

DR. S. F. FORBES, Toledo: Dr. Jenks, of the Detroit Medical College, is present, and I believe would like to discuss this question, if the President would call upon him.

THE PRESIDENT: The society would, of course, like to hear from Dr. Jenks.

DR. JENKS, Detroit: Dr. Forbes made a very great mistake when he said I would like to discuss the question. I wish to say that I have been greatly interested in the paper, and I think great credit is due to Dr. Reamy for the honest manner in which this subject has been presented to us. I can join with him in a part of the prayer, but only the latter half: "Help my unbelief."

I was present at the time these papers were read, the first by Dr. Jackson and the next by Dr. Munde, and if I remember correctly, while it was maintained that a certain percentage of the cases recovered (if I am not

correct, Dr. Reamy can correct me) the average duration of life following recovery in these cases was about two years. Is not that the case, doctor? (DR. REAMY: Yes.)

At that time I made up my mind that I should wait for further developments concerning this operation before I became one of its advocates, and consequently I have refused in every instance, since I heard those papers read, to perform vaginal hysterectomy until I could be convinced of the justifiableness of it. I have this much to say: that the paper of Dr. Reamy that has been read here this afternoon has lead me to believe—that is, I am more inclined to believe from that paper—that the operation is justifiable, than from anything that has been presented to my notice by any other American writer.

Instead of performing vaginal hysterectomy, I have performed in quite a large number of cases the operation which is suggested as having been so brilliantly performed by Dr. Baker, of Boston; high amputation, and in some cases above the os internum. The way I have done—I have simply adopted this plan, without looking to see how others have performed it—has been to girdle the cervix, that is, when only the cervix was implicated, with a bistoury, just indicating the line on which I would proceed with the operation, and then by scissors, slightly curved, going up and around the mass as far as I believed it was necessary, into the healthy tissues. The result of the operation, so far in my practice during the last two years goes, has been so satisfactory that I shall continue to perform that operation when I believe that only the cervix is involved; for in not a single instance since the reading of that paper in Chicago, have I had a return of the disease, where I have performed the Baker operation. But in other cases, where I have simply performed the old operation of curetting, of course I have had the disease return in many instances.

The point is right here, whether the operation is justifiable. As I say, I am inclined to believe it is justifiable in a limited number of cases, but they must be a limited number of selected cases; for, if the duration of life is but two years, then the question arises whether such a formidable operation, which requires the amount of time that has been shown here—an average of about an hour and a half, with a skillful and rapid operator—and the patient liable to die on the table—is justifiable, except in a very limited number of cases. But with the improvement in the technique of the operation, in the technique of all gynecological operations, within the past few years, there is a larger percentage of recovery from every gynecological operation than there ever has been heretofore. Operators are learning to be cleaner; they are learning what sepsis and antisepsis are, and they are using every precaution; and on that account there is a larger percentage of recovery.

I came here, Mr. President, merely as a listener, not expecting to say a single word. I have not arranged my thoughts in the least. I only wish to say in conclusion that I have been more than pleased with the paper. I think it is a most valuable contribution to gynecological literature, and feel amply paid for my trip from Detroit, in hearing that paper alone, although a number of other valuable papers have been read.

I will endeavor to join my friend Dr. Reamy hereafter in the whole of his prayer: "I believe; help my unbelief."

Dr. J. W. Hamilton, Columbus: I have had no experience in performing this operation, but I have had misgivings growing out of my general experience in dealing with cancerous growths of every kind. My largest experience, which perhaps is true of all surgeons in dealing with malignant maladies, is with the mammary gland. I suppose I have encountered four or five hundred of these cases within the last thirty years. Myself and the junior mem-

ber of our firm have operated 129 times; I have operated 121 times myself. And the experience which I have had on that subject has led me to be exceedingly cautious about the circumstances under which I undertake to remove a growth of this kind, and to be very thorough in the procedure.

Now what I allude to is this: Up to four or five years ago I removed the breast. I tried to remove it thoroughly, and to leave no portion of the skin that was involved, or anything else that was involved, belonging to the breast or to the chain of lymphatic vessels that reaches out from it to the axillary glands. Within three or four years I have adopted a more thorough practice. I am not satisfied with removing the breast, and then this chain of lymphatic vessels involved, but I follow up to the axillary space, lay it open very thoroughly, and often remove all of them—that is, of the axillary ganglia. The effect of that has been so marked in several respects as to be very striking, indeed, to me. I perform the operation carefully; pick up each vessel as it comes and stop the hemorrhage immediately. I provide for drainage; sew up the cut with cat-gut; cover it up thoroughly, and use iodoform; put the patient to bed, and in about three or four days that patient talks about being well. In the last six or eight cases we have not taken out a single ligature or stitch. Except that something dries on the dressings, which I suppose to have been serous exudation or pus, we have seen no signs of suppuration, and have had no signs of a relapse. Of these cases, reaching through three or four years, only one has relapsed. I am very sure we did the best we could, but we were pretty late in the day performing the operation, and the light was poor; so we didn't make thorough work in the axillary space. We were conscious of it at the time. With that exception, in the eight cases which ran through,

say, three years, there is not the slightest sign of return in any one of them.

I do not doubt but that the uterus can be removed per vaginam; I do not think there is any trouble about that. The fact is, I have come to the conclusion that there is but very little doubt that we can remove almost anything in the abdominal cavity, with safety to our patients. Surgeons remove tumors under such a variety of circumstances that the profession believes that we are going to and can remove almost anything there is. I have no doubt about the practice of this operation; but the trouble, to my mind, is, that we cannot follow up the details. There may be a bunch of lymphatics left, or there may be lymphatic ganglion that we cannot find in this operation. We are digging at the bottom of a well. There are very imperfect means of exploration. We have no means, as I can see (I say this in the absence of experience), of knowing that we have done thorough and perfect work; and I am satisfied that a malignant growth that has been only imperfectly removed had better not have been touched.

Dr. Jenks: I would like to add one word. I should say where there was a case of cancerous uterus, an operation for its removal would not be justifiable if the cachexia was very marked, or if the surgeon was able to feel enlarged vaginal glands, or if the glands were enlarged about the abdomen. Such a case as that I should consider it unjustifiable to interfere with.

Dr. Reamy, when he was speaking, spoke of Freund's operation. I believe that operation is about abandoned entirely, and it should be entirely abandoned, owing to the statistics. The statistics of Freund's operations, as published in *Le Revue de Science Medicale*, a year and a half ago, in a synopsis of a paper by Schroeder, show that in every one of the cases that had been operated upon by Freund by opening the abdominal cavity, the patient had

died inside of two years. And yet the tyro would think that it would be better to operate by opening the abdominal cavity than to undertake to operate by the vagina. I have no doubt of it; it seems to him the easiest.

Dr. W. H. Taylor, Cincinnati: I think the Society is indebted to my colleague, Dr. Reamy, for a very careful, unprejudiced presentation of this subject. I am very much inclined to adopt the views of Dr. Jenks. I have been opposed to complete extirpation, for just about the same reasons which have been given by the last gentleman speaking. The first case that I ever saw was one in which my opinion was requested as to the propriety of the operation. In that case the disease seemed to be entirely limited to the cervix. I say it seemed to be, so that without hesitation I endorsed the proposed operation, and was present at the extirpation of the uterus. There were no means at all of determining that there was any disease outside of the cervix at the time of the operation. The result was disastrous; and we had an opportunity within a day or two after the operation of carefully investigating the connective tissue about the uterus, and a nodule was found behind the vagina that had entirely escaped antemortem examination. That difficulty must always exist; and, as Dr. Hamilton has said, it is utterly impossible for us to trace enlarged lymphatics outside of the vagina—outside of the cervix, so that a case which may seem to entirely justify the operation will prove afterwards to have been one where complete extirpation of the diseased tissue had not been effected.

The case which Dr. Reamy has referred to came under my care in the hospital, without my having any knowledge whatever of his having ever seen it. I at once diagnosed very extensive vaginal carcinoma. Within a day or two I learned that it had been under his care, and it was a pleasure to me to transfer the case to him for further ob-

servation. It is the one which he has reported as having afforded such a very favorable opportunity for extirpation.

I am thoroughly satisfied that in very many cases the removal of the cervix, and going up as high as possible, will arrest the disease as surely as its complete extirpation, and it is very much less dangerous. I think we must say, considering the locality and the extent of the tissue, that it is an operation without danger. While I very cordially and heartily endorse the manner in which Dr. Reamy's paper is presented, I am not prepared to endorse the opinion that this operation is as yet fully justifiable. Of course I do not forbid it, but it must be done with very great caution, and I am not prepared yet to believe that it is going to be a generally accepted operation.

Dr. H. J. Herrick, Cleveland: I wish to express my obligations to the author of this paper; but I am also unable to express even the feeling of any faith in the operation; I am rather a doubting Thomas still, and would refer for that element of feeling to our common notions of the pathology of cancers. Now we do not know about these pathological growths—of the pathological character; and we do not always make a precise and accurate diagnosis, perhaps. We grant all of this, and we are willing to take those cases that have been reported as cancer, if you please, but bearing in mind their position, their close relations to the network of lymphatic glands, and bearing in mind, also, that the disease is not of a local character, but of constitutional conditions—placing those factors in the balance—I think we may be skeptical with regard to the practicability of the operation. I shall, for one, speak without experience. I have performed hysterectomy, but never, however, for this class of difficulties, and never with any such unfavorable prognosis as these cases involve. I say we must regard these as local manifestations. And it is only as we seek to cure that condition, it seems to me,

at the same time that we repress the local difficulty, that we may hope to do any good to our patient.

I wish, just in this connection, also, to allude to the method that I have resorted to, without sufficient experience to justify any conclusion, in those growths in the openings, involving the mouth, throat, and air passages, so far as they can be reached, as well as the vagina. I resort to hypodermic injections for the repression of their growth. I have used with manifestly favorable results hypodermic injections of bi-chloride of mercury, and the effect is proved by its arresting the growth, and, so far as can be observed, arresting slow formation. I propose this for consideration as a manner of getting along with this class of growths.

I am under special obligations to Prof. Reamy for this paper, for the thoughts it has suggested. Whilst I must say that I am skeptical with regard to these operations, as to the safety of the life of the patient, I still am open to further investigation.

Dr. A. B. Carpenter, Cleveland: The statistics which Prof. Reamy gives us, of about 11 per cent. of mortality, comes to us as a compilation of all the cases that have been operated upon up to date, both in this country and in Germany. I have made this observation, and I think if I lay aside the statistics which come to us from Germany, especially those favorable statistics—statistics of recovery after the operation of vaginal hysterectomy—in America the mortality would be greatly increased. I think it a fact that the German women bear the operation much better than our delicate, high-strung American women. They seem to go upon the table with less fear, and they undergo the operation and suffer from the shock to a much more limited degree than they do in this country.

Prof. Reamy referred, in the technique of his operation, to the anteverting of the uterus. I never have seen that operation made. The operation is made by Martin, who

cuts into the cul-de-sac, carefully ties and stitches the vaginal walls; pulls the uterus down and retroverts the uterus. In regard to the gentleman who spoke about enlarged glands—whether the glands are enlarged—I think it makes very little difference with Martin whether the glands are enlarged or what the condition of the uterus may be; but if the vaginal walls be implicated to any great degree, he is very loath to make the operation.

In regard to not making the operation: while I have as yet had no experience in making the operation of vaginal hysterectomy, we know that if the case goes on the patient is bound to die. If by making this operation we can offer to the patient only a limited degree of hope that she may recover—that she may be spared one, two, or three years—I think it is our duty, either to operate upon the case, or to place it in the hands of a man who is competent to make the operation.

Now, in England, the operation is in ill repute. It is made very seldom in London. I had the privilege of witnessing the treatment of a large number of these cases of epithelioma of the cervix in the Woman's Hospital in London, two years ago. There the treatment is almost entirely conservative. From their conservative standpoint, they have not taken hold of the operation with zeal. They look upon the mortality which follows, and they have not taken hold of the operation with any degree of favor. Their treatment is simply palliative. They were using an application of chemically pure lactic acid, that was applied to the cervix through Ferguson's speculum once or twice, or three times a week, as the case might be, and they found it gave a very considerable degree of relief. Lactic acid has some very remarkable properties. It quickly attacks and destroys fungoid growths and prevents the sloughing of the tissues. Certainly in these cases where it was being applied the pain was less, and the hemorrhage was controlled to a

very considerable degree, and it was considered there as worthy of a trial. This much for the palliative form of treatment as I saw it there.

But to return to the operative procedure. It seems to me that this operation must grow in the opinion of active surgical gynecologists, if you please, and that it does offer a percentage of recovery, and it does offer quite a percentage of increase of days after the operation. For my part I should like to see it further tried; and I believe we shall hear more from it from year to year.

Dr. A. F. House, Cleveland: I believe in discussing this subject that we should make some distinction in regard to whether the intra-vaginal portion is affected, or whether it is the body. In their every day experience in regard to hysterectomy, there are no surgeons but have had experience in something of this sort. I have amputated the cervix several times. I believe in cases of carcinoma, where it is confined to the exterior, and not reaching above the internal os, high amputation undoubtedly would give better results than hysterectomy. Five years ago last April—the 13th day of April—I removed a cervix for epithelioma, above the internal os. That woman to-day is in fair health, much better to-day than she was five years ago. Several other cases have died since then. I believe that in discussing this matter, or in diagnosis, where one operation should be used as superior to another, we should make some distinction as to whether it is confined to the intra vaginal portion, or whether it extends high up. Where it extends high up you would get as good results as with the high operation; but if confined to the intra-vaginal portion, I don't see why hysterectomy should be substituted. The methods now employed for the high operation do not require any great skill, if one is a little careful. I have been in the habit of encircling the cervix with a bistoury, and fastening the vessels well and following

with the curved scissors until I took out a plug, funnel-shaped, reaching as high up as the internal os.

DR. J. HARMON, Warren: I have not anything to say with reference to this paper, but only a mere remark referring to it. We all know that these cancerous growths frequently return after removal, and that it is a marked feature that in some cases they will persistently return at the seat of the first tumor, two, three, four, five, and six or eight times, and always return to the same spot. Other cases will never return to the same seat, but will be developed in other parts of the body. The point is, therefore, that it is not so absolutely essential as we sometimes think, to remove every diseased particle at the seat of the original tumor. I have had several cases of that very description, where the cancerous breast was removed and the axillary glands entirely removed, and everything possibly to be seen of a diseased character was in fact entirely removed, and the disease never returned; but in six or eight months after it was followed by intense dyspepsia, with terrific neuralgic pains through the hips, so as to preclude all rest, preclude all nourishment for five days. That all subsided. Then in four months more there was a sudden return of the tumor in the liver, with enormous distension, and death in seven months after the operation. But in another case there was persistent return to the same seat every time. Then, again, I have seen the removal of cancerous growths from the tongue and lip—three from the tongue and three from the lip—until the whole under lip was taken out, and yet, at the end of the seventh operation, the patient was cured, and remained cured. There is another experience: a lady once consulted a surgeon for a tumor. It was hard. He pronounced it scirrhous, and advised its removal. Ten years after he had occasion to examine her again. Both breasts were healthy. With great surprise he said to her "Madam, is this the breast which I examined? Am I mis-

taken?" "Right, doctor, it is the breast, you are mistaken." "I was never more surprised in my life. I must admit either that I can not tell a scirrhous tumor from scrofula, or an inflamed breast, or a scirrhous tumor can be cured. I won't admit either!" I tell you this story because the doctor who made that diagnosis of a scirrhous tumor was as skilful in the sense of touch, and as careful in his examinations, as any man that ever lived. That is a very strong story, but it is true; yet that woman seven years after finally died of cancerous breast. What was the condition in the seventeen years intervening between the examinations? There is the point.

Another point with regard to these operations that I have observed: if we treat the patient continually after the operation, we will increase the percentage of cures. There are a large number of such cases which I could enumerate. I am satisfied the percentage of absolute cures would be largely increased by judicious after-treatment, medicinal and otherwise.

Dr. T. A. Reamy, Cincinnati: After the great kindness that the members of the society have extended to me in the confidence that they have expressed in my paper, I shall not bother them by any extended remarks when it is so hot and when they have been in session so long. There are one or two things, however, that I would like to say. The discussion has been very profitable to me from all quarters.

I have to say in reply to the statement of my friend, Dr. Hamilton, not in criticism of the statement, because I agree in the main, that while it is true that when the disease is well advanced, carcinoma having attacked the uterus, any part or portion of it, and having involved adjacent structures, operative procedures of any kind are useless, the clinical history of the surgical treatment of cancer of the uterus proves that in a certain proportion of

cases, however, not only a great prolongation of life may be secured, but probably the disease thoroughly eradicated. In this connection it would not seem improper to call attention to a series of cases, five or seven in number, that I reported to this society many years ago—I remember the meeting was at Put-in-Bay—certainly it was nine or ten years ago, where I had made amputation of the cervix. In most of these cases the specimens were examined, not by myself only, but by experts in pathology and microscopy. The names of the physicians examining the specimens are given in the report. It so happens that one of these women, who at that time had had an immunity for several years, is, to my knowledge, still living and in the enjoyment of perfect health. Another has borne a child since. Indeed, so far as I know, but one of them has died of cancer. I have in preparation a communication, a portion of which I have read in the Academy of Medicine, reporting many additional cases. The same care as to an examination of the specimens was taken. In many of these cases the cervix was amputated as high as the os internum, and in two of the cases the women have borne children with no threatened return of the disease, one has borne two, and eight years have elapsed and no return of the disease. Now, if there were but three of these cases that recovered (there being many), and my own experience is only in accord with the testimony of observers all over the world, and the aggregate of cases is very much larger than those given by a single observer—if there were, however, but three cases, well sustained, it would clinically settle the question that in a certain proportion of cases, at least, it must be a local disease and the constitutional involvment a secondary element in those particular cases. I will not enter that line of discussion at all, but simply say that underlying all treatment, surgical or otherwise, must be the acceptance of the

fact that carcinoma of the uterus and of the breast, and the epithelial form of the disease attacking the lower lip in the male, is, in a certain proportion of cases, a local disease and curable. No man will doubt that epithelioma of the lip is a cancer, and no surgeon will deny that epithelioma attacking the lower lip of the male is more common than in the female. No physician here ever expects a return when he removes a cancer from the lower lip of a man, if he takes it out thoroughly; indeed, a recurrence is a rare exception, and final exemption the rule. We, therefore, should not say that cancer is incurable, and, after making a diagnosis, abandon our patient, since some cases may be cured. The vital questions to the clinician are, therefore: Where is the disease located? Is it still local? Are adjacent structures involved? Can all diseased tissue be removed?

In answer to the statement that when this disease has gone so far that total extirpation of the organ through the vagina is justifiable if at all, it must necessarily have become constitutional, I say no. When you see this full report published you will find that I have been exceedingly cautious. I have stated in the paper read that diagnosis of that condition is the next thing to an impossibility. I may be allowed to say that in this case that I operated upon a week ago this morning, the cachexia was so slight that her most intimate neighbors had never suspected that she was sick. There was merely a slight sallowness in a fair woman that could only be detected by a practiced eye. The most careful digital examination that I could make, (and this examination was repeated by Dr. Goode, a most careful observer,) led me to believe that the disease simply extended to the vaginal junction. Nevertheless, I stated to the husband before I commenced that it had possibly gone further. The uterus was movable, and not perceptibly enlarged; and yet the entire body of it was so involved

in disease that it was rotten. I was compelled to antevert it with my fingers. I was not able to hold it with the volcellum. I am convinced that in many cases we will be deceived after all the investigation we can make prior to operation, as to the extent of the disease.

I also stated my own conviction, as stated by my friend and colleague, Prof. Taylor, that in most of these cases where total extirpation would cure, high amputation would likewise cure. Starting from that line, however, we must remember the following clinical fact, known to every man who has operated much in these cases: The cervix has been amputated, as was supposed, through sound tissue; but the stump never healed, the disease went on. The patient finally died. The same operators, in more recent cases, have boldly gone up and amputated at the os internum, or above, and these operations have been followed by cures. Why? Simply because they have amputated higher. They have not only gone up to the line, but gone beyond it into sound tissues. Now, by the same rule, if you go not only to this line but take out the entire organ, it is plain logic that in such cases, assuming that the disease has gone higher, you have a better chance to cure your patient. It is common sense. I repeat, as I stated in the paper, that time only and careful clinical study can settle these questions; and, in some instances, they cannot be settled because a perfect diagnosis cannot always be made.

I would beg to refer to one or two things in the remarks made by Dr. Carpenter. As to the method of Dr. Martin, of retroverting instead of anteverting it, this was also Schroeder's method, the method adopted by almost all of the German profession, Fritche excepted. I did my first operation by this method. From such impressions as I have formed in my limited experience, I think that Fritche's method is easier accomplished. The peritoneal

cavity is not opened by Fritsche's method until the operation is well advanced. In my last case, I ligated the broad ligaments on both sides under my eye.

The next thing I want to call attention to is this—to me a very interesting point: In many of these cases you will see the small intestines. In none of my cases, since the first one, have I stitched anything. The uterus is entirely cut away; the broad ligaments are cut; there is a large cavity; yet you stitch the peritoneum to nothing. Fritche, as I understand, stitches; and so do some other operators, but I have in these cases stitched nothing, I have sewed nothing, I have left the entire cavity open; and in two hours after the operation was done, the stump of the broad ligament on one side would come up against the other. The peritoneal cavity is, therefore, soon closed, but at first the intestines are exposed and there is nothing under them but your iodoform tampon.

If you make a solution of corrosive sublimate for injection in these cases, you should not make it very strong, for you inject it into the peritoneal cavity. The wonder is that you can thus expose the intestines, and so little constitutional disturbance follow; that you can thus leave so wide an opening in the pelvis and in the roof of the vagina, and in a little while all danger of hernia has subsided. The ligatures furnish drainage.

Fractures of the Lower Extremity of the Humerus—Specifically Those of the Inner, or Ulnar, Condyle.

BY S. S. THORN, M. D., TOLEDO.

The object of this paper is to recall attention to the plan of treatment put forward by Dr. O. H. Allis, of Philadelphia, and to give emphases to my own conviction that passive motion is not necessary to *their well conduct.*

As a rule, these fractures enter the joint from within, passing obliquely outward and downward through the ulna fossa and trochlea. They are moderately common, are followed by deformity and impaired function of the joint, limitation of flexion and extension.

CASE I.—M., a child of about six years, was seen by me about half an hour after the accident, which consisted, as I learned, of a fall upon the inner side of the elbow.

SYMPTOMS: Swelling, independent mobility of inner condyle, as shown by moving the part between the fingers, crepitation and deformity, consisting of an upper displacement of the fractured condyle and widening of the joint, with a tendency on the part of the forearm to hang parallel with the long axis of the body, while its fellow took that position known as the "carrying position" or function, to-wit: The forearm, when supine, hanging so as to form a slightly obtuse angle with the arm, hand projecting outwardly from the side.

The treatment was that enjoined by Dr. O. H. Allis. Both arms being exposed, the injured one was extended and held in position to secure the obtuse angle spoken of and while thus held was covered by long narrow strips of adhesive plaster running parallel with the long axis of the arm, and extending from shoulder to wrist. These strips completely surrounded the arm, but were not in contact at their edges. Next, a splint of the same length as plasters, and full width of arm and forearm, so cut as to take the normal shape of the arm, was heavily and evenly padded with cotton batting and wrapped loosely with old

goods, then placed along the face of the extended limb, and held by bandages covering the whole length of the splint. The fingers were flexed over the distal end of the board, and the arm supported by a sling passing down the whole length.

CASE II.—This was in a spare old woman, who was leading an easy, indolent life. The history given for case one represents this case, save in one particular, which was somewhat troublesome, and consisted of a puffing up from position of the distal end of the limb. The dressings, practically the same, were continued to the end without change except to readjust the bandages.

CASE III.—J. J., aged twenty-two, train hand, was caught while making a coupling, inner condyle fractured, and soft parts considerably contused and lacerated, joint not opened. Patient had been temporarily dressed by another before coming to me. The arm was held at an angle of about —°, and maintained, varying from the others to meet indications presented by the contusions and lacerations. The case was under my care about seven weeks, after which time the patient was ordered to use gentle friction, and not to be in a hurry to test the arm. Seventy days after receiving the injury, he went to work on a baggage car, and has continued from that time to the present. When he began work the motions were exceedingly limited, certainly less than one-fourth normal. Patient was examined by me in April. Flexion, extension and rotation were at that date practically perfect. The muscles, however, of arm and forearm yet somewhat wasted.

CASE IV.—Was brought to me by Dr. S. about ten weeks after accident. The doctor reported fracture of inner condyle, which was treated in the semi-extended position. After fourteen days, passive motion was begun. At my examination I found the parts about the elbow red, swollen and painful. These symptoms increased by motion. Advised absolute rest, to be continued until the patient should voluntarily begin use of arm. Recovery complete.

In none of these cases was passive motion made by me or permitted during their treatment. In every case the patient was allowed to consult his own time and pleasure in using the arm. Case No. 2, the old lady, is the only

one not examined by me since active treatment was stopped. I have, however, been told by another physician and friends that she, like the others, has a good useful arm, and without the usual "gun-stock arm" deformity, which consists of an angle, obtuse but reverse of that which normally exists, and which so well promotes the carrying and other functions of the limb.

You will observe that passive motion was not employed at any time in any of the three cases cared for. In the other it was interdicted as soon as seen by me. In this particular I have differed from the plan of Allis and others. He advises motion of the joint after fourteen days, while Hamilton begins after three to seven days, and continues to the end. His plan is to dress the limb with the forearm fixed at a right angle, but to remove the dressing after seven days, trusting to the effusions into and about the joint to hold the parts in position, with daily passive motion. Mr. Erichsen says all these injuries in the vicinity of joints must be conducted on very similar principles—combat local inflammation. The arm must be flexed and supported in an easy position on a proper splint. After the subsidence of the swelling the fractured bone, whatever be the precise nature of the injury, is best maintained in position by being put in an angular splint applied to the inner side of the limb, the forearm being kept in the mid-state between pronation and supination, and well supported by a sling. It is in this particular fracture that passive motion should be had recourse to early, a tendency to rigidity of the joint being otherwise often left; motion in adults to begin in five weeks, in children in three. I quote from Hamilton :—"The arm must be immediately flexed to nearly or quite a right angle, when, without much manipulation, the fragments will be made to resume their place, a gutta percha, or felt, right-angled splint, well and carefully cushioned, may now be applied and se cured by rollers. Suitable pads must also aid the splint and roller in keeping the fragments in place." Hamilton further advises the daily dressing of the limb, and adds that in seven days, and perhaps earlier, passive motion must be commenced and perseveringly employed from day to day until the cure is accomplished.

Markoe prefers keeping the forearm in a position about

10° short of a right angle, believing that in this position the ulna itself will act as a splint, and by its support on the injured part of the trochlea hold in its place the broken condyle. The angular splint is fitted to the arm and forearm upon the back of the limb instead of upon its front or sides. On the inside it covers the condyle; upon either side it presses injuriously upon the epicondyles, if in front, the fragment cannot be so well adjusted or supported.

Bryant says these are grave accidents, and likely to be followed by some stiffness of the joint. Effusions are considerable and diagnosis difficult. The part had better be left until swelling subsides to perfect diagnosis. In all these cases involving the condyles of the humerus, whether into the joint or not, the fragments should be brought into position by extension upon the forearm when needed, with manipulation, and an anterior jointed rectangular splint be applied; the upper half of the splint being well passed up the arm and the lower down to the wrist. The joint angle may be left exposed. Unite in three or four weeks, depending upon age. All splints should be removed at the end of this period, and passive motion *allowed.*

Among the older writers there is greater unanimity of sentiment as to mode of treatment and estimate of the seriousness of the injury. Cooper, Malgaigne, Gibson, Chelius, Holmes, Ferguson, Druitt, Keelty, Gross, Agnew, Packard, Erichsen, Bryant, recommend the flexed position and passive motion sooner or later. Liston and Toland advise the extended position, not mentioning passive motion. Clarke and Markoe, obtuse angle; nothing said about motion. Prof. Agnew is the only one of these times who advises the bandage before splint.

I have named and grouped so many to show that, before Dr. Allis, no one save Liston and Toland questioned the propriety or the necessity of the angular position, and further, that passive motion was the rule, Liston, Ferguson, Druitt, Toland and Clarke, only, not advising it.

A study of the joint structures and the relative position of the bones of the forearm and arm will, I trust, be of service to the better understanding of the principles involved in this new departure of Dr. Allis. The long axis of the joint normally tends towards the same axis, (not at

right angle) of the limb; thus, when contact of the articulating ends is maintained, the forearm projects from the body when it holds the supine position; the ulna articulating side being longer than the opposite side, compels the outward projection if contact of the articulating surface is secured.* I have prepared this joint so as to represent the parts normally, and also to show what takes place when there is a fracture, and it is attended by the usual displacement, or when it is promoted by treatment in the flexed position, particularly so if the arm and forearm are supported by rectangular splints applied upon either the anterior or posterior surface of the limb, or upon both surfaces at the same time. You will notice the relative position of the radius and ulna when the limb is flexed; the bones are not on a plane. The ulna normally being considerably lower, there exists a separation on their lower lines of about three-fourths of an inch. I now bring about the state of things that exists when a fracture obtains, and when dressed in the flexed position, the forearm being bound to a posterior splint. In this condition we have a lifting of the ulna, and with it the fragment. If an anterior splint is applied, the radius is crowded to the same plane as the ulna, again displacing the fractured portion. Theoretically and with our specimen, where there are no muscles, the malposition of the fragment is very great; in the natural state, the change of position is less, but very positive.

In one event the humerus is relatively dragged down; in the other the fragment elevated, resulting in practically the same deformity and impairment of the motions of flexion and extension. In my demonstration I simply sustain the position of Dr. Allis—that the limb, when we have a fracture of the inner or ulnar condyle, should be treated in the extended position. Dr. Allis says that this practice has yielded in his hands excellent results; that is, when the dressings were removed the limbs were found free from deformity, and even, in the milder cases, from stiffness. Stimson says: "The theoretical ground upon which the method rests, I believe to be entirely sound, and the practice to be free from objection whenever the

*Bones of arm and forearm were here shown to the meeting.

extended position does not favor, as it sometimes does, dislocation of the forearm backward. In the extended position, with the head of the radius resting against the capitellum, the internal condyle can be brought fully down by fixing the arm and drawing the wrist gently outward, and so long as the forearm is kept in this position the condyle cannot rise."

Further he says; "I have not had sufficient experience with the method of treatment in the extended position to say more than that I am myself willing to make use of it, but that I prefer to use a moulded posterior gypsum splint, and a position 30° or 40° short of complete extension, in order to detect any tipping forward of the fragment *if* it should occur. * * * I do not think early passive motion is necessary to prevent stiffness of the joint; and when it is painful, the pain lasting for some time, I believe it to be actually harmful by increasing and prolonging the inflammation." The records of cases are filled with instances in which the joint has become almost entirely rigid under treatment by passive motion, and then after the tenderness had ceased, mobility has returned gradually under ordinary daily use of the limb.

Dr. Allis, in presenting his new plan of treatment, shows it to be founded upon principles which I believe a careful study of the joint, anatomically and pathologically, as well as in its function physiologically, fully sustain. Certainly my own experience upholds his theory and practice.

I criticise the directions of Hamilton and others, when they order passive motion, because I believe that injuries of bones extending into joints, involving joint structures, call in their treatment for exactly the same conditions that inflammation of a joint from other causes requires. Here we may accomplish much by preventing inflammatory action, and surely this is better than promoting or helping to follow, and afterwards treating the acquired condition. To be short, I maintain that if a fracture enter a joint, absolute rest is the great preventive of inflammation, and so passive motion should be *interdicted*. If anchylosis impends, it is because of the existence of inflammation within the joint, resulting either directly from joint trauma or by reason of a cachexia, in which joint inflammations are prone, and only require some excitement to develop.

That condition termed falsed anchylosis is usually peri-articular, and should not cause anxiety.

My contention is against passive motion as a rule; I might say as an exception also, because they are either damaging or not called for. If the joint structures are not encroached upon, certainly there can be no necessity for submitting the parts to the chances, or for torturing the patient. Rest for the injured part, to prevent inflammation. Rest for the inflamed part, to hasten recovery. Do not treat what does not exist or threaten. Further, if the encrusting cartilages are inflamed, eroded, or otherwise seriously injured, anchylosis is the end much to be hoped for, unless an operation be advisable. If the joint is not injured, anchylosis cannot obtain. To my mind, the greatest bugbear in the treatment of fractures is the fear of anchylosis, and the greatest torture to the patient usually comes from the unnecessary effort made to prevent it. I say to my patients, when there is freedom from pain begin to use the joint, not before. Then time and voluntary effort will complete our cure.

DISCUSSION.

Dr. W. W. Jones, Toledo: I think the doctor did himself very little injustice when he spoke of his modesty. The paper seems to be after all, come to sift it down, on the question of passive motion and nothing else. I presume there is not a surgeon in the State of Ohio but who has treated the kind of injury spoken of, both in the straight direction, as he recommends, and in the bent position, as recommended by all the older authorities; and you get results in the same way in either position. I have myself treated a number of cases in the straight position and got the same results that I got in the bent position; the only question, after all, involved in the paper, to my mind, is the question of passive motion. Now, the older authorities and the experience of the age have demon-

strated that, with this kind of an accident, you are always liable to get a stiff arm and to get less motion of the arm than you had before; and sometimes, if you do not get a stiff arm, you may get one that is deformed to a certain extent, as has been well described in that paper—one in which the arm will twist around—and yet there is as much mobility as there was before. It simply is sifted down to the question of passive motion. If you do not have that passive motion, in a large number of your cases you will get a stiff arm, and that is the experience of physicians and surgeons all over the country. When you get the result spoken of, you get really a good result. There is a little deformity there, it is true, but the result is good. In the bent position, you relax the flexor muscles, which really prevents deformity. If you are going to treat that arm for the purpose of having a permanent union there, you can best treat it in the bent position instead of the straight one. I have demonstrated that again and again, because it relaxes the flexor muscles of the arm to bend it so as to allow the parts to keep in their proper position. Whether you will have passive motion or not, depends upon the wishes of the surgeon—whether he wants to avoid a suit for malpractice; for he will frequently get a stiff arm that will not bend at all if he does not make passive motion, and if he does make it, he has got the other result, which is really good, although there is considerable deformity attending it.

Dr. J. T. Lawless, Toledo: I must disagree with the last speaker in the matter of position. I treated some fractures in the bent position a few years ago, and had useful arms, but some impaired motion. I find it is hard to keep a reduced fracture in place; but, by keeping the arm perfectly quiet three or four weeks, and then using passive motion, in every instance I have had perfect results. I have not failed in a single case. I have got a

case now which I am treating in the same way. At the suggestion of Dr. Thorn, some years ago, I tried the method he suggests, and in my hands, at least, it has been successful. The reason why, I think, deformity exists in any of those cases is because it is impossible to keep them in the bent position and keep the fractured parts in place; the tension of the muscles will tend to draw the bones out of position, while in the straight position it is almost impossible, with anything like a reasonable dressing.

OBITUARIES.

Orsemus Ward Marshall.

ORSEMUS WARD MARSHALL was born in Boonville, N. Y., July 9, 1827; died at his residence in Jeffersonville, O., July 23, 1886, aged 59 years and 14 days.

At the age of 13 years he was baptized a member of the Baptist Church at Akron, Erie County, N. Y., by his father, Rev. Samuel Marshall, then pastor of that congregation.

He had good educational advantages, and at the age of 20 went to Tennessee and taught a term of school; after which he returned to Xenia, O., where his father was then located, and taught in the public schools of that town. In connection with this work he engaged in the study of medicine, and attended his first course of lectures at Medical Department University of Michigan, at Ann Arbor, session of 1852-3.

At the close of the session, viz: on February 28, 1853, he was married to Rosabelle Stratford, of Ann Arbor, who was his faithful companion for more than thirty-three years.

Soon after their marriage this young doctor and his young wife came to Jefferson Township, and began their life-work among a people to whom they were strangers, but by years of faithful work, both as a physician and as a friend of education and of improvement, he earned the respect which was

evidenced by the number and character of those who assembled to pay the last kindly service which we can render to our fellows.

It was not unusual in that day for young men to engage in the practice of medicine after a single course of lectures, but as soon as practicable he attended a second course at the Cincinnati College of Medicine and Surgery, and took his degree of Doctor in Medicine from that institution.

He maintained and valued the honor of his profession, and had a nice sense of the obligations of its members to each other as well as to their patients. He was the first President of the first Medical Society organized in Fayette County, and was, at his death, a member of the Ohio State Medical Society.

During the last year, though suffering a physical disease, which he early knew must probably end in death, he retained his mental vigor almost unimpaired and his interest both in professional work and in the moral and material advancement in the community.

Even in the shadow of death, and within but a few days of the actual dissolution, he administered with success to the relief of patients, who for thirty years had relied on his skill and his judgment, and who surviving mourn him with a sorrow scarcely less than that of his immediate family.

The funeral obsequies were attended by one of the largest crowds of people ever present on such an occasion in our place; six physicians acted as pall-bearers. Rev. Rose delivered the funeral sermon at the M. P. Church on Sunday, after which the remains were taken to Fairview cemetery for burial, followed by a large number of people.

LEWIS J. PROEHL.

LEWIS J. PROEHL was born July 18th, 1850, in Akron. At the age of 14 he apprenticed with his father, as a stone cutter, becoming in time a skilled workman. At 20 he began teaching school during the winter months, working at his trade in summer. In 1873 he entered the Normal School at Lebanon, Ohio, graduating from that institution in 1876, after which he entered the Ohio Medical College at Cincinnati; attended one course of lectures, and entered the office of Dr. W. C. Jacobs, at Akron, as a student. Returning again to Cincinnati, he graduated from the Ohio Medical College with the class of '79. He then returned to Akron and opened an office with Dr. W. J. Underwood.

He was a careful, conscientious prescriber, a man of more than ordinary ability, a genial, kind hearted man. He died of consumption, April 29, 1887, after a lingering illness. His funeral was attended by hosts of friends, the medical profession assisting in the last sad rites.

William Morrow Beach.

Dr. William Morrow Beach died at his home near London, Ohio, on the morning of May 6th, 1887. He was born in Amity, Madison County, Ohio, May 10, 1831. His education in the schools consisted in that of the common schools, and a short time in the O. W. University at Delaware, Ohio. He commenced the study of medicine with Dr. J. F. Boal, of Amity, spent one year in the office of his brother, Dr. J. N. Beach, and completed the course in the office of Prof. S. M. Smith, of Columbus, O., graduating from Starling Medical College in 1853. He commenced practice at Unionville Center, but after a short time removed to Lafayette, in 1835, and thence to the home where he died, in 1865.

He was commissioned Assistant Surgeon of the volunteer forces, April 3, 1862, and joined the army at Shiloh just after the battle, being assigned to duty with the 20th O. V. I., and later, May 2, 1862, with the 78th O. V. I., as Assistant Surgeon. He was commissioned Surgeon of the 118th O. V. I., May 19, 1864, and joined that regiment at Ackworth, Ga., June 9, 1864. During his three years of service he was frequently on detached duty, the character of which indicated his standing in the army. At Vicksburg he was Division Hospital Director for Logan's division, and after the surrender of the city was placed in charge of all the Confederate sick and wounded left within our lines, and was at the close of the war Hospital Director, and on the Board of Operating Surgeons for the Second Division, 23d Army Corps. At the close of the war he returned to his

practice, and though diverted to some extent by attention to other avocations, he continued his practice until his last illness.

He was elected and served in both branches of the General Assembly of Ohio; in the House during the term commencing in 1869, and in the Senate, commencing in 1871. During his service in the Legislature he was a devoted friend to all measures having for their purpose the advancement of the interests of the medical profession, and those that more intimately interested the people through the profession. He introduced and procured the passage of an act to provide for the vaccination of children in public schools.

The subject of this sketch was well and favorably known to the members of this Society, as well as in the society circles of the medical fraternity in general. He was an interested and active member of the American Medical Association, and of the Ohio State Sanitary Association, of which he was first President, of District and County Medical Societies, and was President of this Society at its meeting at Akron one year ago. He has been a frequent contributor to the transaction of the different medical societies named, and to the medical journals.

John Wadhams Russell.

JOHN WADHAMS RUSSELL, M. D., of Mount Vernon, Ohio, was born in Canaan, Litchfield County, Connecticut, on the 28th of January, 1804. His father, the Hon. Stephen Russell, was repeatedly a member of the Connecticut Legislature, and his grandfather, Jonathan Russell, commanded a brig under General Lafayette's letters of marque in 1778. After rendering his country much service, he was captured and imprisoned on the prison-ship at New York, where the treatment of the prisoners was so severe that after vainly endeavoring to incite them to rise and capture the ship, Captain Russell jumped overboard and in that manner effected his escape. Dr. Russell's mother was Sarah Wadhams, of Goshen, Connecticut. His education until his thirteenth year was received at the common schools of Litchfield, whither his father removed in 1808. Then he was sent to Morris Academy, and under the Rev. Truman Marsh, pursued his studies, and was prepared for and admitted to Hamilton College in 1821. He pursued his classical studies with the Rev. Mr. Langdon, of Bethlehem, Connecticut, one year, as his impaired health would permit, and in the fall of 1823 went South. He took charge of an academy at Red Bank, Colleton District, South Carolina, six months, and there commenced his professional studies with Dr. Sheridan, a scientfic and noble-hearted Quaker. Returning to Connecticut, he attended the medical lectures at Yale College one course, and then going to Pittsfield, Massachusetts, there attended the lectures of Berkshire Medical College. Subsequently, going to Phiadelphia, he was a

private pupil of one of that city's greatest physicians and surgeons, George McClellan, the father of General George B. McClellan, and graduated at Jefferson Medical College there in 1827. The late S. D. Gross, of Philadelphia, and Geo. W. Mears, of Indianapolis, Ind., were students of Dr. McClellan's at the same time. Returning to Litchfield, he there began the practice of his profession, and continued so engaged there for one year, during which time he delivered a course of lectures on anatomy and physiology to a private class of young men. In 1828 he removed to Ohio, and began practice at Sandusky City, where he remained but a few months, when he moved to Mount Vernon, in Knox County. Dr. Russell was led to locate himself in Mount Vernon on account of its proximity to Kenyon College, and his attachment to the teachings of the Protestant Episcopal church, of which he was a member; but his mind was fixed when told by the oldest practitioner of Mount Vernon, with considerable spirit, "You can't earn your salt." No sooner was this said to him than Dr. Russell resolved, "I'll try," and the gentleman who thus spoke lived to see him do a more lucrative business than he did himself. He was a member of the Knox County and the State of Ohio Medical Societies, also of the American Medical, the Rocky Mountain, and the State of California Medical Societies, also was a delegate and member of the International Medical Congress of 1876. At this meeting of the International Medical Congress, Dr. Gross said, "it gave him great pleasure to introduce to his medical brethren, his esteemed friend and classmate, Dr. Russell, whose extreme modesty *alone* prevented him from being the leading surgeon of the land."

During the administrations of Governors Tod and Brough, he, with Dr. Weber, of Cleveland, and Dr. Murphy, of Cincinnati, performed the functions of State board of examining physicians and surgeons, of which Dr. Russell was chairman, and subsequently president of the State Medical Society.

On the organization of the First National Bank of Mount Vernon, he became a prominent stockholder and director, which connection he maintained, having previously been president of the Mt. Vernon Bank, of which the First National was the successor.

In 1828, Dr. Russell married Miss Eliza, daughter of the Hon. William Beebe, of Litchfield, Connecticut. This lady died in 1871, having been the mother of five children, one died in infancy, three others, sons, one a druggist and two regular physicians and graduates, died at the ages of fifty-three, thirty-three and twenty-nine. Only one daughter survives, wife of Col. W. C. Cooper, a prominent attorney in Mount Vernon, and member of Congress from the Ninth District. In 1872, Dr. Russell married, in San Francisco, California, Ellen M. Brown, daughter of Joseph Brown, Esq. She died October 14, 1879.

Dr. Russell often said, "that his success in business was the result of economy, industry and the constant study and practice of the profession of his choice." Dr. Russell was a man of indefatigable industry. During his residence in this county, I think he performed more physical and mental labor than any of his cotemporaries, in or out of the profession. His work did not begin with the rising and close with the setting sun, and the day usually alloted to rest found him actively engaged. In his early practice he visited his patients on horseback. While on a professional trip, near Gambier, in 1836, his horse fell on the ice and injured his knee-joint, which resulted in false anchylosis, and ever after compelled him to use a crutch. For a like disability many would have abandoned an active practice, but with him it had no effect, only to intensify his zeal, and change his mode of travel. Mules were called into requisition, and with two of these animals, and a carriage behind, he scaled the hills of this and adjoining counties for half a century. While the mules and the crutch will be recalled as distinguishing marks, yet the name of Dr. Russell will remain a household word in this section of the

country, and the man as a man will not be soon forgotten.

During the sixty years of his professional life, his instruction was sought by not less than three hundred young men preparing to enter the medical profession. He was the most capable and thorough office preceptor I have ever known. He imparted instruction to his pupils by recitations, dissections, demonstrations, and oral instruction; and by his own exemplary conduct taught them medical ethics. He elicited the profound respect and admiration of his pupils, and inspired them with enthusiasm in their studies. In his journeys to his patients he would take a student, and his text-book, conduct the recitation *en route*, and, when darkness, or other causes, intervened, no time would be lost; for now came the memorable quiz over past work, and for which he was truly famous. That his office was an uncomfortable place for a lazy student, and that the doctor had no patience with a man who would not work his brain, the subjoined letter of his own will fully attest:

"MT. VERNON, Feb'y 18, 1886.

"William Morrow Beach, M. D.,
President of the Ohio Medical Society,

"Dear Sir:—Your letter of the 9th inst. was duly received. If my health permits I shall be pleased to attend the meeting of the State Medical Society at Akron, on the 2d day of June next. I do not like to promise even a short paper, but may make, concisely, a few remarks on the 'Conservatism of Symptoms in Diseases."

"My infirmities at 82 will increase. The river is at hand; the boat is manned by an angel host. I will aim to leave such foot-prints on the shores of Time as shall not dishonor our Society, my family, or friends. I have taken great pleasure with medical gentlemen at our County, State, and National gatherings, and may still enjoy another taste of our annual feast.

"For fifty-nine years it has been my happy lot to serve the afflicted conscientiously, faithfully, and I wish I might add, judiciously. This I cannot always say. I have prayed for wisdom, and would advise the same to my juniors.

"The great sin in our profession is *indolence*. A man is responsible, not only to do as well as he knows, but to use his faculties to know what to do.

"Hoping you will have a full, pleasant, and instructive meeting at Akron, I am, ever

"Your obedient servant,

"JOHN W. RUSSELL."

The Doctor was present at Akron, which was the last medical meeting he attended.

It was in general surgery that he took most interest, and found most pleasure. He regarded anatomical knowledge as the true basis of all success and skill in surgery. Living in a country where it is necessary to be a general practitioner in medicine and surgery, he performed most of the so-called capital operations, such as lithotomy, herniotomy, and all the most important amputations, except that of the hip joint, and many of the more delicate operations, as that for cataract, etc., and with almost uniform success. He was careful to keep pace with the Science of Medicine, and to make himself thoroughly acquainted with medical literature, and the discoveries of the age. In all matters he faithfully followed his convictions of duty, regardless of the sacrifice of self which such a course might require.

He was tendered the professorship of surgery in several Medical Colleges, but declined them all, preferring to remain in private practice in the city of his choice.

He was an active Christian, ever ready to perform those duties which the love of Christ devolved upon him.

He had an hypertrophied prostate gland for eighteen years, the pain and other resulting inconveniences of which he bore with fortitude, and without a murmur. Retention of urine and uremia caused his death, March 22, 1887, at the advanced age of 83 years. He died, as many had predicted, "in the harness," having prescribed for patients up to within forty-eight hours of his death. F. C. L.

LIST OF OFFICERS

And Places of Meeting from the time of the Organization of the Society to the Present.

1846—Columbus.

President,	G. W. Boerstler,	Lancaster
1st Vice President,	J. P. Kirtland,	Cleveland
2d Vice President,	John Butterfield,	Columbus
3d Vice President,	J. C. Judkins,	Cincinnati
Cor. Secretary,	R. Thompson,	Columbus
Rec. Secretary,	Jas. F. Hibberd,	Montgomery Co.
Rec. Secretary,	H. Lathrop,	Columbus
Treasurer,	R. L. Howard,	Columbus
Librarian,	Francis Carter	Columbus

1847—Columbus.

President,	R. Thompson,	Columbus
1st Vice President,	R. Hills,	Delaware
2d Vice President,	G. W. H. Landon,	Westerville
Secretary,	F. Carter,	Columbus
Treasurer,	F. Carter,	Columbus
Librarian,	F. Carter,	Columbus

1848—Columbus.

President,	J. P. Kirtland,	Cleveland
1st Vice President,	J. B. Thompson,	Columbus
2d Vice President,	J. W. Russell,	Mt. Vernon
3d Vice President,	J. M. Bigelow,	Lancaster
4th Vice President,	J. F. Hibberd,	Montgomery Co.
Secretary,	F. Carter,	Columbus
Secretary,	R. Hills,	Delaware
Treasurer,	H. Lathrop,	Columbus
Librarian,	F. Carter,	Columbus

1849—Columbus.

President, ... R. D. Mussey, ... Cincinnati
1st Vice President, . . J. B. Thompson, . . . Columbus
2d Vice President, . . E. Gaston, ... Morristown
3d Vice President, . . J. L. Vattier, ... Cincinnati
4th Vice President, . . W. W. Rickey, ... Toledo
Secretary, ... R. Hills, ... Delaware
Secretary, ... F. Carter, ... Columbus
Treasurer, ... G. W. H. Landon, . Westerville
Librarian, ... F. Carter, ... Columbus

1850—Columbus.

President, ... R. L. Howard, ... Columbus
1st Vice President, . . P. J. Buckner, . . Georgetown
2d Vice President, . . E. H. Davis, ... Chillicothe
3d Vice President, . . S. O. Hunt, ... Morrow
Secretary, ... R. Hills, ... Delaware
Secretary, ... F. Carter, ... Columbus
Treasurer, ... G. W. H. Landon, . Westerville
Librarian, ... F. Carter, ... Columbus

1851—Columbus.

President, ... Geo. W. Boerstler, . . Lancaster
1st Vice President, . . J. P. Kirtland, ... Cleveland
2d Vice President, . . Robert Rodgers, . . . Springfield
3d Vice President, . . E. Gaston, ... Morristown
4th Vice President, . . Jno. L. Vattier, . . . Cincinnati
Secretary, ... Wm. Trevitt, ... Columbus
Secretary, ... M. Effinger . . . . . Lancaster
Treas. and Lib., . . . J. B. Thompson, . . . Columbus

1852—Cleveland.

President, ... H. A. Ackley, ... Cleveland
1st Vice President, . . A. I. Bennett, ... Bolivar
2d Vice President, . . H. S. Conklin, ... Sidney
3d Vice President, . . Friend Cook, ... Atwater
4th Vice President, . . Benj. Staunton, ... Salem
Secretary, ... R. G. McLean, . . . Lockbourne
Secretary, ... H. G. Carey, ... Dayton
Treas. and Lib., . . . W. W. Rickey, ... Cleveland

1853—Dayton.

President, ... Julius S. Taylor, . . . Carrolton
1st Vice President, . . Robert Rodgers, . . . Springfield
2d Vice President, . . Thos. McNally, ... Chillicothe
3d Vice President, . . Stephen Bonner, . . . Cincinnati
4th Vice President, . . Matthew Thompson, . Mt. Vernon
Secretary, ... Henry K. Steele, ... Dayton
Secretary, ... C. S. Kaufman, . . . Cincinnati
Treasurer, ... P. M. Crume, ... Eaton
Librarian, ... J. W. Hamilton, . . . Columbus

1854—Cincinnati.

President, ... Charles Woodward, . . Cincinnati
1st Vice President . . .Jonas Moore, ... Marietta
2d Vice President.. . . R. G. McLean, . . . Lockbourne
3d Vice President . . .I. A. Coons, ... Dayton
4th Vice President. . . E. Sterling, ... Cleveland
Secretary. . . . . Landon Rives, ... Cincinnati
Secretary. . . . . P. S. Conner,. . . . . Cincinnati
Treasurer . . . . . Stephen Bonner,. . . . Cincinnati

1855—Zanesville.

President. . . . . G. S. B. Hempstead . Portsmouth
1st Vice President. . . W. Moorehead,. . . . Zanesville
2d Vice President.. . . R. Hills, ... Delaware
3d Vice President.. . . W. Mount, ... Cumminsville
4th Vice President. . . L. M. Lawson,. . . . .Cincinnati
Secretary . . . . . W. W. Dawson, . . . Cincinnati
Secretary . . . . . C. C. Hildreth, ... Zanesville
Treasurer, ... F. M. Crume, ... Eaton
Librarian, ... F. Carter, ... Columbus

1856—Columbus.

President, ... Peter Allen,. . . . . Kinsman
1st Vice President, . . R. G. McLean, . . Lockbourne
2d Vice President,. . . G. W. Rogers,. . New Richmond
3d Vice President,. . . Charles Cochran, . . . Sandusky
4th Vice President, . . John Davis,. . . . . Dayton
Secretary, ... W. W. Dawson,. . . . Cincinnati
Secretary, ... S. B. Davis, ... Shadeville
Treasurer,. . . . . R. J. Patterson, ... Columbus
Librarian, ... G. W. Maris, ... Columbus

1857—Sandusky.

President, ... Daniel Tilden, ... Sandusky
1st Vice President, . . J. A. McFarlan,. . . . . Tiffin
2d Vice President,. . . J. W. Burr, . . . Mt. Vernon
3d Vice President, . . J. G. F. Holston, . . . Zanesville
4th Vice President, . . H. S. Conklin,. . . . . Sidney
Secretary, ... H. J. Donahoe, ... Sandusky
Secretary, ... W. W. Dawson, . . . Cincinnati
Treasurer, ... Charles Cochran, . . . Sandusky
Librarian, ... G. W. Maris, ... Columbus

1858—Massillon.

President, ... F. T. Hurxthal, ... Massillon
1st Vice President, . . L. Firestone,. . . . . Wooster
2d Vice President, . . S. M. Smith, ... Columbus
3d Vice President, . . John DeLamater, . . . Cleveland
4th Vice President, . . J. P. Kirtland, ... Cleveland
Secretary, ... A. Metz, ... Massillon
Treasurer, ... T. J. Mullen, . . New Richmond
Librarian, ... J. B. Thompson, . . . Columbus

1859—Columbus.

President, ... L. Firestone, ... Wooster
1st Vice President, . . Jas. Bronson, . . . Newton Falls
2d Vice President, . . John Davis, ... Dayton
3d Vice President, . . B. S. Brown, . . . Bellefontaine
4th Vice President, . . Chas. Robertson, . McConnelsville
Secretary, ... W. W. Dawson, . . . Cincinnati
Secretary, ... A. Metz, ... Massillon
Treasurer, ... J. B. Thompson, . . . Columbus
Librarian, ... R. Thompson, ... Columbus

1880—White Sulphur Springs.

President, ... H. S. Conklin, ... Sidney
1st Vice President, . . R. R. McMeens, . . . Sandusky
2d Vice President, . . S. Bonner, ... Cincinnati
3d Vice President, . . W. P. Kincaid, ... Neville
4th Vice President, . . S. P. Hunt, ... Morrow
Secretary, ... W. W. Dawson, . . . Cincinnati
Secretary, ... R. Gundry, ... Dayton
Treasurer, ... J. B. Thompson, . . . Columbus
Librarian, ... R. Thompson, ... Columbus

1861—White Sulphur Springs.

President, ... M. B. Wright, ... Cincinnati
1st Vice President, . . J. Plympton, ... Madison
2d Vice President, . . J. Harmon, ... Warren
3d Vice President, . . N. Dalton, ... Logan
4th Vice President, . . R. Gundry, ... Dayton
Secretary, ... W. W. Dawson, . . . Cincinnati
Secretary, ... T. B. Williams, . . . Delaware
Treasurer, ... J. B. Thompson, . . . Columbus
Librarian, ... Robt. Thompson, . . . Columbus

1862—White Sulphur Springs.

President, ... J. W. Russell, ... Mt. Vernon
1st Vice President, . . G. C. Blackman, . . . Cincinnati
2d Vice President, . . G. W. Boerstler, . . . Lancaster
3d Vice President, . . J. M. Southard, ... Marysville
4th Vice President, . . B. S. Brown, ... Bellefontaine
Secretary, ... E. B. Stevens, . . . Cincinnati
Secretary, ... T. B. Williams, ... Delaware
Treasurer, ... J. B. Thompson, . . . Columbus
Librarian, ... R. Thompson, ... Columbus

1863—White Sulphur Springs.

President, ... W. P. Kincaid, ... Neville
1st Vice President, . . M. Dawson, ... Royalton
2d Vice President, . . D. S. Gans, ... Cincinnati
3d Vice President, . . David Noble, . . Sugar-Tree Ridge
4th Vice President, . . J. J. Hamill, ... Newark
Secretary, ... E. B. Stevens, ... Cincinnati
Secretary, ... N. Dalton, ... Logan
Treasurer, ... J. B. Thompson, . . . Columbus

1864—White Sulphur Springs.

President, ... Gustav C. E. Weber, . . Cleveland
1st Vice President, . . J. G. Kyle, ... Xenia
2d Vice President, . . A. Metz, ... Massillon
3d Vice President, . . Robert Rodgers, . . . Springfield
4th Vice President, . . A. Carey, ... Salem
Secretary, ... E. B. Stevens, ... Cincinnati
Secretary, ... W. C. Hall, ... Fayetteville
Treasurer, ... J. B. Thompson, . . . Columbus

1865—White Sulphur Springs.

President, ... B. S. Brown, ... Bellefontaine
1st Vice President, . . R. L. Sweeney, ... Marion
2d Vice President, . . E. H. Hyatt, ... Delaware
3d Vice President, . . A. Dunlap, ... Springfield
4th Vice President, . . W. H. Mussey, ... Cincinnati
Secretary, ... E. B. Stevens, ... Cincinnati
Secretary, ... W. C. Hall, ... Fayetteville
Treasurer, ... J. B. Thompson, . . . Columbus

1866—White Sulphur Springs.

President. . . . . J. W. Hamilton, . . . Columbus
1st Vice President, . . R. Gundry, ... Dayton
2d Vice President, . . A. G. Stevenson, . . Westerville
3d Vice President, . . J. D. Robinson, ... Wooster
4th Vice President, . . J. S. Reisinger, ... Galion
Secretary, ... E. B. Stevens, ... Cincinnati
Secretary, ... W. C. Hall, ... Fayetteville
Treas. and Lib., . . . J. B. Thompson, . . . Columbus

1867—Yellow Springs.

President, ... Edward B. Stevens, . . Cincinnati
1st Vice President, . . Robert Rodgers, ... Springfield
2d Vice President, . . C. P. Landon, ... Westerville
3d Vice President, . . B. B. Leonard, . . West Liberty
4th Vice President, . . D. Noble, . . . Sugar-Tree Ridge
Secretary, ... W. C. Hall, ... Fayetteville
Secretary, ... J. W. Weaver, ... Wooster
Treasurer, ... J. B. Thompson, . . Columbus

1868—Delaware.

President, ... A. Dunlap, ... Springfield
1st Vice President, . . T. B. Williams, ... Delaware
2d Vice President, . . T. A. Reamy, ... Zanesville
3d Vice President, . . H. K. Steele, ... Dayton
4th Vice President, . . J. H. Henderson, . . . Newville
Secretary, ... W. C. Hall, ... Fayetteville
Secretary, ... J. N. Beach, . . . West Jefferson
Treasurer, ... J. B. Thompson, . . . Columbus

1869—Columbus.

President, ... S. M. Smith, ... Columbus
1st Vice President, . . M. Dawson, ... Royalton
2d Vice President, . . S. S. Scoville, ... Lebanon
3d Vice President, . . A. B. Jones, ... Portsmouth
4th Vice President, . . E. L. Hill, ... Oxford
Secretary, ... W. C. Hall, ... Fayetteville
Assistant Secretary, . . E. H. Hyatt, ... Delaware
Treas. and Lib., . . . J. B. Thompson, . . . Columbus

1870—Cleveland.

President, ... Thad. A. Reamy, . . Zanesville
1st Vice President, . . H. J. Herrick, ... Cleveland
2d Vice President, . . J. C. Brown, ... Urbana
3d Vice President, . . T. G. McEbright, ... Akron
4th Vice President. . . D. D. Bramble, . . . Cincinnati
Secretary, ... W. C. Hall, ... Fayetteville
Assistant Secretary. . . E. H. Hyatt. . . . . Delaware
Treas. and Lib., . . . J. B. Thompson, . . . Columbus

1871—Cincinnati.

President, ... W. W. Dawson, . . . Cincinnati
1st Vice President, . . I. Kay, ... Springfield
2d Vice President, . . C. P. Landon, . . . Westerville
3d Vice President, . . E. Sinnett, ... Granville
4th Vice President, . . J. W. Russell, Jr., . Mt. Vernon
Secretary, ... W. C. Hall, ... Fayettville
Assistant Secretary, . J. W. Hadlock, . . . Cincinnati
Treas. and Lib., . . . J. B. Thompson, . . . Columbus

1872—Portsmouth.

President, ... A. B. Jones, ... Portsmouth
1st Vice President, . . A. Blymer, ... Delaware
2d Vice President, . . J. D. Cotton, ... Marietta
3d Vice President, . . W. J. Anderson, . . Newtonville
4th Vice President. . . J. B. Hough, ... Ridgeville
Secretary, ... J. W. Hadlock, ... Cincinnati
Assistant Secretary, . . W. J. Conklin, ... Dayton
Treas. and Lib., . . . S. S. Gray, ... Piqua,

1873—Columbus.

President, ... H. J. Herrick, ... Cleveland
1st Vice President, . . W. W. Jones, ... Toledo
2d Vice President, . . E. H. Hyatt, ... Delaware
3d Vice President, . . H. C. Pearce, ... Urbana
4th Vice President. . A. C. Miller, ... Orrville
Secretary, ... W. J. Conklin, ... Dayton
Assistant Secretary, . . T. O. Edwards, Jr., . . Lancaster
Treas. and Lib., . . . S. S. Gray, ... Piqua

1874—Toledo.

President, ... W. W. Jones, ... Toledo
1st Vice President, . . C. P. Landon, . . . Westerville
2d Vice President, . . A. C. McLaughlin, . . . Fremont
3d Vice President, . . N. Gay, ... Columbus
4th Vice President, . . E. W. Howard, ... Akron
Secretary, ... J. W. Hadlock, . . . Cincinnati
Assistant Secretary, . . E. Jennings, ... Dayton
Treas. and Lib., . . . S. S. Gray, ... Piqua

1875—Put-In-Bay.

President, ... E. Williams, ... Cincinnati
1st Vice President, . . W. S. Scarf, ... Bellefontaine
2d Vice President, . . A. H. Agard, ... Sandusky
3d Vice President. . . S. S. Thorn, ... Toledo
4th Vice President, . . J. N. Beach, . . . West Jefferson
Secretary, ... J. W. Hadlock, . . Cincinnati
Assistant Secretary, . . J. F. Baldwin, ... Columbus
Treas. and Lib., . . . S. S. Gray, ... Piqua

1876—Put-In-Bay.

President, ... W. J. Scott, ... Cleveland
1st Vice President, . . S. W. Gordon, . . . Georgetown
2d Vice President, . . A. J. Miles, ... Cincinnati
3d Vice President, . . J. G. Nolen, ... Toledo
4th Vice President, . . W. T. Ridenour, ... Toledo
Secretary, ... J. W. Hadlock, ... Cincinnati
Assistant Secretary, . . J. F. Baldwin, ... Columbus
Treas. and Lib., . . . S. S. Gray, ... Piqua

1877—Put-In-Bay.

President,	W. H. Philips,	Kenton
1st Vice President,	S. F. Forbes,	Toledo
2d Vice President,	C. S. Muscroft,	Cincinnati
3d Vice President,	J. C. Hubbard,	Ashtabula
4th Vice President,	A. N. Reed,	Norwalk
Secretary,	J. W. Hadlock,	Cincinnati
Assistant Secretary,	J. F. Baldwin,	Columbus
Treas. and Lib.,	S. S. Gray,	Piqua

1878—Columbus.

President,	B. B. Leonard,	West Liberty
1st Vice President,	J. C. Kennedy,	Batavia
2d Vice President,	B. F. Hart,	Marietta
3d Vice President,	J. L. Mounts,	Morrow
4th Vice President,	T. B. Williams,	Delaware
Secretary,	J. F. Baldwin,	Columbus
Assistant Secretary,	Thos. Waddel,	Toledo
Treas. and Lib.,	T. W. Jones,	Columbus

1879—Dayton.

President,	J. A. Murphy,	Cincinnati
1st Vice President,	John Davis,	Dayton
2d Vice President,	T. G. McEbright,	Akron
3d Vice President,	J. D. Edwards,	Xenia
4th Vice President,	C. A. Kirkley,	Toledo
Secretary,	J. F. Baldwin,	Columbus
Assistant Secretary,	J. Snodgrass,	Kenton
Treas. and Lib.,	T. W. Jones,	Columbus

1880—Cleveland.

President,	E. H. Hyatt,	Delaware
1st Vice President,	Cyrus Falconer,	Hamilton
2d Vice President,	J. C. Hubbard,	Ashtabula
3d Vice President,	H. J. Donahoe,	Sandusky
4th Vice President,	R. L. Sweney,	Marion
Secretary,	J. F. Baldwin,	Columbus
Assistant Secretary,	C. A. Kirkley,	Toledo
Treas. and Lib.,	T. W. Jones,	Columbus

1881—Columbus.

President, ... Starling Loving, . . . Columbus
1st Vice President, . . W. M. Beach, ... London
2d Vice President, . . C. P. Landon, ... Westerville
3d Vice President, . . E. B. Harrison, ... Napoleon
4th Vice President, . . J. A. Wilkins, ... Delta
Secretary, ... J. F. Baldwin, ... Columbus
Assistant Secretary, . . C. A. Kirkley, ... Toledo
Treas. and Lib., . . . T. W. Jones, ... Columbus

1882—Columbus.

President, ... C. P. Landon, ...Westerville
1st Vice President, . . E. Sinnett, ... Granville
2d Vice President, . . A. C. Miller, ... Cleveland
3d Vice President, . . N. Gay, ... Columbus
4th Vice President, . . W. B. Hedges, ... Delaware
Secretary, ... G. A. Collamore, ... Toledo
Assistant Secretary, . . M. F. Lee, ... Columbus
Treas. and Lib., . . . T. W. Jones, ... Columbus

1883—Cleveland.

Same officers continued.

1884—Columbus.

President, ... J. C. Reeve, ... Dayton
1st Vice President, . . E. B. Pratt, ... Mt. Sterling
2d Vice President, . . B. W. Davis, ... Marion
3d Vice President, . . D. J. Merriman, . . . Painesville
4th Vice President, . . J. F. Baldwin. . . . . Columbus
Secretary, ... G. A. Collamore, ... Toledo
Assistant Secretary, . . E. C. Brush, ... Zanesville
Treas. and Lib., . . . T. W. Jones, ... Columbus

1885—Dayton.

President, ... Wm. Morrow Beach, . . London
1st Vice President, . . H. Z. Gill, ... Cleveland
2d Vice President, . . H. R. Kelly, ... Galion
3d Vice President, . . T. McEbright, ... Akron
4th Vice President, . . J. D. Robison, . . Wooster
Secretary, ... G. A. Collamore. . . . . Toledo
Assistant Secretary, . . E. C. Brush, ... Zanesville
Treas. and Lib., . . . T. W. Jones, ... Columbus

1886—Akron.

President,	T. McEbright,	Akron
1st Vice President,	J. M. Weaver.	Dayton
2d Vice President,	W. S. Battles,	Shreve
3d Vice President,	X. C. Scott,	Cleveland
4th Vice President,	J. Snodgrass,	Kenton
Secretary,	G. A. Collamore,	Toledo
Assistant Secretary,	E. C. Brush,	Zanesville
Treas. and Lib.,	T. W. Jones,	Columbus

AUXILIARY SOCIETIES.

Cincinnati Academy of Medicine.

NAME OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Aub, Joseph.	84 W 7th,	Ohio Medical College
Ayres, S C.	64 W 7th,	Ohio Medical College
Bigney, P M.	66 Franklin,	Miami College
Brent, C P.	33 W 8th,	
Brown, A M.	436 W 8th,	University of Pennsylvania
Buckner, J H.	65 E 4th.	
Beebe, B F.	149 Broadway,	Ohio Medical College
Barbour, C C.	Newport, Ky.,	Med. College of Ohio
Bacharach, F	410 W Court,	Ohio Medical College
Carpenter, J W.	Gilbert Ave. and McMillan,	Philadelphia
Carrick, A L.	154 Broadway,	Dublin College
Cassat, M.	313 Elm,	Ohio Medical College
Christopher W S	155 E 3d,	Ohio Medical College
Clark, B F,	385 George,	Ohio Medical College
Cleveland, J L.	7th and Baymiller,	Ohio Medical College
Conner, P S.	159 W 9th	Jefferson Medical College
Culbertson, J C.	199 W 7th,	Bellevue Hosp. Med. Col.
Carroll, Travis.	27½ W 8th,	University of Louisville
Dowling, F.		Ohio Medical College
DeCourcy, W E.	475 W 8th.	
Davis, John	323 Elm.	
Davis, O E.	6th and Walnut.	
Davy, R B.	Findlay and Freeman ave.	Jeff. Med. Col.
Dawson, W W.	3d and Br'dway,	Ohio Medical College
DeBeck, D.	137 W 8th	Ohio Medical College
Drury, A G.	57 Gest,	Ohio Medical College
Dulaney, J J.	Covington, Ky,	Ohio Medical College
Dun, W A.	70 E 4th,	Miami Medical College
Dunham, W H.	Findlay & Baymiller,	Cin. Col. of Med.
Dodd, Chas. W.	1070 Vine,	University of Michigan
DeWitt, Wm. H.	Auburn Ave,	Miami Medical College
Dorschug, F P.	126 Molitor,	Miami Medical College
Everets, O.	College Hill	
Fackler, G A.	54½ Elm,	Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Fibbe, J H. . . .	7th and Vine, .	Starling Medical College
Fels, Geo. W. . .	112 W 6th, . .	Ohio Medical College
Fishburn, C D. . .	70 McMicken.	
Fortmeyer, C W. .	5th and Mill.	
Fogel, J L.... . .	94 Clinton. . . .	Ohio Medical College
Forcheimer, F. . .	160 W 9th, ...	New York City
French, J M.. . .	190 Baymiller, .	Ohio Medical College
Fennel, Otto. . .	Walnut, ...	Ohio Medical College
Grimm, A . . .	McMicken, . . .	Ohio Medical College
Groesbeck, H. . .	Johnston Building,	Miami Med. College
Heighway, A E Jr.	88 W 7th, . . .	Ohio Medical College
Heise, O N . . .	85 W 8th, . . .	Ohio Medical College
Harper, W F . .	Lockland, O.	
Hochstetter, E R.	Spring Grove Ave	
Haines, W D . .	583 Freeman ave, .	Ohio Medical College
Haight, J B . . .	617 McMillan	
Haiff, B G. . . .	Madison Road..	
Heighway, A E . .	86 W 7th, . . .	Ohio Medical College
Heighway, S C .	270 Elm,.	Ohio Medical College
Hyndman, J G . .	22 W 9th, . . .	Ohio Medical College
Hottendorf, L P .	92 Bank,.	Ohio Medical College
Hoeltge, A . . .	322 Linn.	
Hendley, F. . . .	W 8th,.	Ohio Medical College
Haines, Wm. . .	583 Freeman ave,	Ohio Medical College
Jones, G E . . .	177 Baymiller,. .	Ohio Medical College
Jones, Robt.. . .	201 Park ave . .	Ohio Medical College
Junkerman, G S .	116 W 7th, . . .	Ohio Medical College
Junkerman, C G .	116 W 7th,. . . .	Ohio Medical College
Judkins, Wm . .	216 Race..	
Judge, J F. . . .	264 Race, .	Cin. Col. of Med. and Surg.
Juler, H Cundell .	288 Race,.	London
Kibler, F	137 W 8th, . .	Ohio Medical College
Keck, P A . . .	682 Race, . . .	Miami Medical College
Kiely, W E.. . .	146 Broadway, ...	Cincinnati
King, J R . . .	548 E 3d, .	Bellevue Hosp. Med. Col.
Knight, W . . .	288 Race	
Koehler, Max . .	124 W 9th, ...	Leipzig
Kramer, F . . .	376 Baymiller, .	Miami. Medical College
Krouse, L J . . .	W 8th, ...	Ohio Medical College
Kelly, Wm. H . .	Covington, Ky, .	Ohio Medical College
Luff, Theo. . . .	677 Eastern ave. .	Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Ludlow, E	547 W 8th	
Lummis, G D	149 Broadway,	Ohio Medical College
Loughead, F F	Madisonville Pike,	Ohio Medical College
Lewis, W E	85 E 5th,	Cin'ti College of P. and S.
McKee, E S	57 W 7th,	Ohio Medical College
McMicken, J C	134 Carlisle Ave,	Ohio Medical College
Miles, A J	80 W 8th,	Ohio Medical College
Maloney, J J	265 Richmond	
Mitchell, G S	277 W 8th,	Ohio Medical College
Mitchell, E W	Oak and Reading R'd,	Ohio Med. Col.
Muscroft, C S.	355 John,	Ohio Medical College
Marcus, Jos E	259 W 8th	Ohio Medical College
Neff, Wallace	140 W 9th,	Ohio Medical College
Nickles, Sam'l	114 Everett,	Ohio Medical College
Neufourth, L	Mt. Healthy,	Ohio Medical College
Niedemeyer, H	1304 W 6th,	Ohio Medical College
Osborne, Mary E.	W 7th,	Woman's Medical College
Orr, G B	101 E 4th,	Ohio Medical College
Oliver, J C	266 Elm,	Miami Medical College
Palmer, C D	308 W 7th,	Ohio Medical College
Phelps, A V	5 Carlisle ave	Ohio Medical College
Prendergast, J W.	W 8th,	Ohio Medical College
Percivall, H D	Covington, Ky,	Ohio Medical College
Phythian, C F	3d and Br'dw'y	Ohio Medical College
Querner, L A	412 Race,	Ohio Medical College
Rachford, B K	Newport, Ky	Ohio Medical College
Ransohoff, Jos	296 Walnut,	Ohio Medical College
Ravogli, A	7th and Vine,	Rome, Italy
Reamy, T A	4th and John,	Starling Medical College
Rosenfield, A	117 W 8th	
Reemelin, Rud	493 Elm	
Ryan, G W	114 W 9th,	University of Louisville
Speidel, G	391 Elm,	Ohio Medical College
Schoolfield, C B	Dayton, Ky,	Ohio Medical College
Schoolfield, D	Newport, Ky,	Ohio Medical College
Schmuck, F C	18 Clark	Long Island Medical College
Schwab, Louis.	Blue Rock st.	Ohio Medical College
Schwagmeyer C A.	665 Elm,	Ohio Medical College
Seely, W W	4th and Broadway,	Ohio Medical College
Shaw, W	489 Coleraine ave,	Ohio Medical College
Shaller, J M	535 Sycamore,	Cincinnati College
Sittel, Theo	174 E Pearl	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Stanton, Byron.	157 Dayton	
Stark, Wm	W 8th	
Stewart, Rob't.	125 W 9th,	Ohio Medical College
Stark, Sigmar,	W 8th,	Bellevue Hosp. Medical College
Taft, J	122 W 7th	
Tangeman, C W	293 Elm,	Ohio Medical College
Tate, J H	3d and Broadway,	Ohio Medical College
Tauber, B	157 W 9th,	Cincinnati, Ohio
Thorpe, J M	Covington, Ky	
Thrasher, A B	157 W 9th,	Ohio Medical College
Trush, Jacob.	144 Broadway,	St. Louis, Mo
Tucker, A A	301 Central ave	Miami Med. College
Thompson, J A	John,	Miami Medical College
Thorner, Max	354 W 8th,	Munich, Royal University
Taylor, L H	89 W 9th,	Ohio Medical College
Thornton, R H	Newport, Ky	Ohio Medical College
Taft, Wm	122 W 7th,	Ohio Medical College
Underhill, J W	418 John,	Bellevue Hosp. Med. College
Wallingford, J T	211 Baymiller,	Ohio Medical College
Walker, E W	98 W 8th,	Ohio Medical College
Wenning, W H	146 Laurel,	Miami Medical College
Werner, G C	Freeman Ave	Freeburg, Baden
White, T P	Clark	
Whittaker, J T	100 W 8th,	Ohio Medical College
Williams, E	64 W 7th,	University of Louisville
Woodward, W R	116 W 9th	
Withrow, J M	4th and John,	Ohio Medical College
Wilder, W H	7th and John,	Ohio Medical College
Wiggins, John	936 McMillan	Col. of Phys. and Surg. N. Y
Winn, J J	88 E 5th,	Ohio Medical College
Young, D S	248 W 7th,	Albany, New York
Zenner, Ph	335 W 9th,	Cincinnati College
Zinke, Gustav	413 Elm,	Ohio Medical College
Zinke, E B	674 Vine,	Ohio Medical College

Allen County Medical Society.

Burton, E G	Westminster,	Ohio Medical College
Brooks, P H	Lima,	Miami Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Baldwin, F J	Bluffton,	Not reported
Curtis, E	Lima,	Herkimer Med. Coll. New York
Curtis, C L	Lima,	Coll. Med. Surgery Cincinnati
Clippinger, J S	West Cairo,	Not reported
Clark, J R	Bluffton,	Not reported
Ewing, Frank	West Cairo,	Med. Dep't Univ. Mich.
Fritche, C R	Lima,	Coll. Phys. & Surg's, Baltimore
Foltz, T H	Lima,	Med. Dep't Univ. of Wooster
Goebel, Anna M.	Lima,	Med. Dep't Univ. Mich.
Herrmann, S S	Lima,	Med. Dep't Univ. Buffalo
Harper, W H	Lima,	Starling Medical College
Honnell, J Guy	Beaver Dam,	Not a graduate, prac. 32 yrs.
Hiner, S B	Lima,	Ohio Medical College
Kahle, A W	Lima,	Coll. Phys. & Surg's, Baltimore
Kahle, R D	Lima,	Univ. of City of New York
Krebs, R I	Westminster,	Jefferson Medical College
Murphey, J J	Lima,	Med. Dep't Univ. Mich.
McHenry, Wm.	Lima,	Not a graduate
Pence, J C	Spencerville,	Fort Wayne Coll. of Med.
Rudy, A S	Herring,	Ohio Medical College
Sullivan, William.	Westminster,	Not reported
Stueber, F G	Lima,	Rush Medical College
Sager, Newton, Jr.	Herring,	Not reported
Steiner, D W	Lima,	Med. Dep't Univ. Mich.
Vail, J B	Lima,	Ohio Medical College
Weadock, F M	Lima,	Med. Dep't Univ. Mich.

Ashtabula County Medical Society.

Amidon, H N	Geneva,	West'n Res. Univ. Med. Dep't
Burrows, S S	Geneva,	Med. Dep't Univ. Mich.
Case, Freeman D	Ashtabula,	Cleveland Medical College
Dickson, John A	Ashtabula,	Miami Medical College
Dorman, H W	Harbor,	Cleveland Medical College
Ellsworth, W O	Austinburgh,	W. R. U. Med. Dep't
Fifield, Amos K	Conneaut,	Col. of Physicians & Surgeons
Fletcher, F W	Geneva,	W. R. U. Med. College
Flower, Wallace R	Ashtabula,	Cleveland Medical College
Fox, Curtis L	Kingsville,	Cleveland Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Fricker, Henry P	Ashtabula,	National Medical College
Gilchrist, W S	Ashtabula,	W. R. U. Med. Dep't
Graham, James W	West Williamsfield,	University of Buffalo
Grover, C T	Orwell,	Med. Dep't Univ'ty of Wooster
Hopkins, A W	Ashtabula,	Med. Dep't Univ. of Wooster
Hubbard, Thomas	Ashtabula,	University of Pennsylvania
King, Will L	Ashtabula,	W. R. U. Med. Dep't
Kinnear, H N	Harbor,	W. R. U. Med. Dep't
Lamb, Judson L	Lenox,	Med. Dep't Wooster University
Merriam, E D	Conneaut,	Geneva Medical College
Morris, J L	Kingsville,	Cleveland Medical College
Palmer, Darwin G	Geneva,	Cleveland Medical College
Pomeroy, A L	Windsor,	Cleveland Medical College
Pulsipher, H H	Austinburg,	Clevel'd Medical College
Rathbone, Abel G	South New Lyme,	University of Buffalo
Shatto, Homer J	Colebrook,	Med. Dep't W. R. College
Sherwood, W H	Painesville,	Cleveland Medical College
Tower, Bryant M	Unionville,	W. R. U. Medical Dep't
Tucker, George W	Orwell,	Miami Medical College
Tudor, Omar H	Kenton,	Miami Medical College
Tuttle, Freeman A	Jefferson,	Cleveland Medical College
Upson, Fred W	Conneaut,	W. R. U. Medical Dep't
Ward, W A	Conneaut,	Medical Dep't W. R. U.
Webster, E M	Kingsville,	Cleveland Medical College
Webster, G E	Kingsville,	W. R. U. Medical Dep't

Athens County Medical Society.

Adair, W A	Amesville,	Medical College of Ohio
Alderman, W N	Nelsonville,	Bellevue Hos. Med. Col.
Allen, H C	New Straitsville,	Bellevue Hos. Med. Col.
Axline, J D	Shawnee,	Medical College of Ohio
Blakeley, G W	Athens,	Columbus Medical College
Butt, S L	Nelsonville,	Medical College of Ohio
Cable, Charles	Nelsonville,	Ohio Medical College. Bellevue Hos. Med. Col.
Campbell, Hugh	Logan,	Columbus Medical College
Danford, H D	Trimble,	Medical College of Ohio
Dawson, W G	Laurelville,	Columbus Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Dunlap, C D	Athens,	Columbus Medical College
Dye, J H	Logan,	Medical College of Ohio
Elder, B D	Nelsonville,	Not a Graduate
Jones, W J	Murray City,	Medical College of Ohio
Lash, H M	Athens,	Cin. Coll. Med. and Surg.
Learned, A J	Millfield,	Columbus Medical College
Little, David	Logan,	Starling Medical College
Little, James	Logan,	Medical College of Ohio
McKetrick, James	Chauncey,	Not a Graduate
Moore, W R	Swan,	Med. Dept. Univ. of Pa. Medical College of Ohio
Pullen, G W	Logan,	Starling Medical College
Rannells, D V	McArthur,	Starling Medical College
Richardson, A B	Athens,	Medical College of Ohio Bellevue Hos. Med. Col.
Shepard, W E W	Nelsonville,	Jefferson Medical College
Sylvester, J E	McArthur,	Medical College of Ohio, Bellevue Hos. Med. Coll.
Witham, H G	Shade, P O.,	Not a Graduate
Wolfe, Andrew	McArthur,	
Wright, I C	Logan,	St. Louis Medical College
Vorhes, B C	Lee P O.,	Medical College of Ohio

Bay City Medical Society.

Donahoe, H J	Sandusky,	W. R. Med. Col. Cleveland
Gawne, A J	Sandusky,	Wooster Med. Col., "
Goodsell, E J	Huron,	Wooster Med. Col., Cleveland
Heiter, Carl	Sandusky,	Ngghoff, Russia
Love, M J	Bloomingville,	L. I. Col. Hosp., N. Y
McConnelly, F C	Vermillion,	W. R. Med. Col., Cleveland
Story, Wm	Castalia,	Bellevue, N. Y.
Szendery, L	Sandusky,	Starling Med. College

Belmont County Medical Society.

Cooke, John	Bridgeport,	Starling Medical College
Cooper, J W.	Bellaire,	Jefferson Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Wagener, V.	Bridgeport,	Medical College of Ohio
Williams, B O.	Martin's Ferry,	Univ. of Penn. Med. Dep.
Hervey, W E	Martin's Ferry,	Medical College of Ohio
Hobensack, J D	Martin's Ferry,	University of Penn
Boone, J S	Powhattan,	Cin. Col. Med. and Surg
Close, G A	Bellaire, Starling & Columbus,	Columbus
Himlin, A J.	Bridgeport,	Jefferson Medical College
West, J Park.	Bellaire,	Medical College of Ohio
Anderson, G L	Bellaire,	Starling Medical College
Blackford, J M.	Martin's Ferry	
Fisher, W S	Bridgeport,	Licentiate
McClellan, J S.	Bellaire,	Medical College of Ohio
Clark, J A	Glencoe,	Columbus Medical College
Alexander, John	St. Clairsville,	Practitioner
Hewittson, A H	St. Clairsville,	Miami Medical College
West, John E	St. Clairsville,	Ohio Medical College
West, S L	St. Clairsville,	Ohio Medical College
Walker, D L	St. Clairsville,	Jeff. Medical College
Workman, J C	Uniontown,	Columbus Medical College
Caldwell, G H.	Harrisville,	Columbus Medical College
Clark, W R	Morristown,	Columbus Medical College
Hotson, J A.	Flushing,	Miami Medical College
Webster, J V	Flushing,	Cin. Col. of Med. and Surg'y

Brown Co. Academy of Medicine.

Gordon, T W	Georgetown,	Cleveland Med. Coll.
Ellsberry, W W	Georgetown,	Cincinnati Med. Coll. Ohio Medical College
Ellsberry, A M	Georgetown,	Starling Medical College
Stephenson, Y	Georgetown,	Starling Medical College
McCall, R B	Georgetown,	Ohio Medical College
Wylie, J L	Ripley,	Ohio Medical College Bellevue Hospital
Winters, J C	Ripley,	Ohio Medical College
Dixon, W A	Ripley,	Ohio Medical College
Love, Wesley	Higginsport,	Ohio Medical College
Williamson, J H	Higginsport,	Ohio Medical College
Guthrie, D S	Hillsboro,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Beck, Isaac M	Sardinia,	Med. Society at Hilsboro, 1828
McClain, J B	Sardinia,	Starling Medical College
Bivans, W A	New Hope,	Starling Medical College
Fritts, J H	Ash Ridge,	at. 1 course at Miami, (Cin).
Heaton, T.	Aberdeen,	Ann Arbor
Love, J H	Hamersville,	Ohio Medical College
Baird, J L	Fincastle,	Ohio Medical College
Sheldon, S B	Five Mile,	Miami Medical College
Gordon, S C	Arnheim,	Cin. Col. of Med. and Surg.
Fee, Robert	Georgetown.	
Bell, E R	Ripley,	Jefferson Medical College
Wylie, A N	Ripley,	Transylvania, Lex. Ky., 1841
Salisbury, J N	Russelville,	Ohio Medical College
Williamson, A M.	Dayton,	Ohio Medical College
Smith, Fletcher	Dover, Ky	
Gilfillin, Alex	Ash Ridge.	
Salisbury, C W	Winchester,	Starling Medical College
Markley, Lee	Georgetown,	Ohio Medical College
Ellsberry, C M	Dayton,	
Sidwell, A C.	Locust Ridge,	
Reade, T M	Springfield,	St. Louis Medical College
Earhart, A E	Mount Oreb,	Starling Medical College
Russell, W H	Mount Oreb,	Cin. Col. of Med. & Surg.
Buckley, M O	Higginsport,	
Stewart, F M	Sardinia,	
Coleman, W K.	West Union	

Central Ohio Medical Society.

Allen, H P	Columbus,	Col. of Phys. and Surg., N.Y
Baldwin, J F.	Columbus,	Jeff. Medical College
Barnhill, J U	Columbus,	Columbus Medical College
Beverly, P F.	Columbus,	University of Michigan University of Missouri
Blake, W H.	Shadeville,	Starling Medical College
Beach, J N	West Jefferson.	Starling Medical College
Blesch, P E.	Columbus,	Starling Medical College
Bancroft, J L	Columbus,	Columbus Medical College
Cooper, Albert	Columbus,	Columbus Medical College

NAMES of MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Clark, C F	Columbus,	Jefferson Medical College
Dumm, S C.	Columbus,	West. Reserve, Cleveland
Dawson, J O	Lincoln, Neb.,	Rush Med. Col. Chicago
Evans, A E	Columbus,	Miami Medical College
Fraker, H C	Columbus,	Med. Dept. of Univ., Wooster
Frankenberg, O	Columbus,	Starling Medical College
Guerin, Z F.	Columbus,	Starling Medical College
Gay, Norman	Columbus,	Willoughby University
Gunsaulus, F	Columbus,	Starling Medical College
Herrick, L C	Columbus,	University of Vermont
Hoover, T C.	Columbus,	Starling Medical College
Hoover, L S.	Grove City,	Miami Medical College
Hendrixon, H	Columbus,	Cleveland Med. College
Hamilton, J W.	Columbus,	Willoughby University
Hamilton, W D	Columbus,	Columbus Medical College
Halderman, D	Columbus,	Starling Medical College
Helmick, S C	Commercial Pt.,	Starling Med. College
Jewett, H F.	Hilliard,	Columbus Medical College
Jones, Toland	London,	Starling Medical College
Johnson, O	Worthington,	Willoughby University
Jones, T W	Columbus,	Starling Medical College
Jones, Mrs. O S	Columbus,	Columbus Medical College
Kinsman, D N	Columbus,	Medical College of Ohio
Kirkpatrick, J F.	Midway Roads,	Columbus Med. College
Lewis, J W.	Lancaster,	Starling Medical College
Loving, Starling	Columbus,	Starling Medical College
McIntire, Wm	Millville,	Starling Medical College
Mills, J T.	Jersey,	Starling Medical College
Maris, Clarence	Columbus,	London Hosp. Col., England
Nash, W H H.	Columbus,	Miami Medical College Bellevue Med. College
Probst, C O	Columbus,	Miami Medical College
Pinkerton, W L	Galloway,	Starling Medical College
Ranney, S W.	Hope,	Starling Medical College
Richards, S S	Outville,	Columbus Medical College
Schueller, J B	Columbus,	University Wurzburg, Ger.
Sharp, H J.	London,	Starling Medical College
Stritmatter, Mrs. L.	Columbus	Woman's Med. Col. of Pa.
Thomas, F W	Marion,	Starling Medical College
Turney, C F.	Columbus,	Starling Medical College
Vanderburg, C R.	Columbus,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Warner, Frank.	Columbus,	Columbus Medical College
Wilson, E J..	Columbus.	Long Island College Hosp.
Woodruff, L..	Alton,..	Starling Medical College

HONORARY MEMBERS.

Dunlap, Prof.	Springfield.	
Detmers, Prof	Ohio State University, Columbus..	
Ewing, S	Salt Lake City, Utah	
Haywood, John	Westerville	
Landon, C P.	Westerville	
Merrick, Rev.	Delaware	
Morse, D A..	Oxford Retreat.	
Thompson, O N	Westerville	
White, Chas P.	U. S. Barracks, N. Y. City, W. Point, N. Y	

Champaign County Medical Society.

Ayers, J H	Urbana,	University of Vermont
Bennett, P R Jr.	Urbana,	Bellevue Hos. Med. College
Baker, B F	St. Paris,	Bellevue Hos. Med. College
Brown, J C	Urbana,	Medical College of Ohio
Clark, J H	Mechanicsburg,	Starling Medical College
Demand, C E	Mechanicsburg,	Starling Medical College
Goddard, I W	Urbana,	Starling Medical College
Green, W J	Woodstock,	Columbus Medical College
Hunt, W S	Terra Haute,	Cin'ti Coll. Med. & Surg.
Hunt, H B	Careysville,	Cin'ti Coll. Med. & Surg.
Hodges, G H	Urbana,	Med. Dep't Wooster University
Hitt, T S	Urbana,	Starling Medical College
Henderson, Rob't	Urbana,	Columbus Medical College
Imhoff, C E	Urbana.	Bellevue Hosp. Med. College
Jones, C	St. Paris,	
Laws, D D	King's Creek.	Starling Medical College
Mosgrove, J M	Urbana,	Ohio Medical College
Mosgrove, S M	Urbana,	Miami Medical College
Mosgrove, W A	Urbana,	Miami Medical College
Moore, S C	Cable,	Cincinnati College Med. & Surg.
Means, W J	Addison,	Starling Medical College
Musson, J J	St. Paris,	Starling Medical College

NAME OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Offenbacker, —.	St. Paris,	
Preston, H S	Mutual,	Columbus Medical College
Pearce, H C	Urbana,	Starling Medical College
Pearce, A B	Urbana,	Starling Medical College
Sullivan, W J	Urbana,	Starling Medical College
Thatcher, J	Crayon,	Starling Medical College
Whitmer, D M	Millerstown,	
Williams, A L	N. Lewisburg,	Starling Medical College
Wolf, J H	King's Creek,	Starling Medical College

Cincinnati Medical Society.

Albers, G W	68 Spring St.,	Miami Medical College
Allen, Geo M	96 Auburn Ave.,	Miami Medical College
Ayres, S C	64 West 7th,	Ohio Medical College
Bang, Theo	Harrison Ave. 24 Wd.,	Miami Med. Col.
Berteling, J B	8th St., 21st Wd,	Miami Medical College
Birchard, A D	Harrison and McLean av.,	Mia Med. Col.
Bramble, D D	165 Broadway,	Ohio Medical College
Brown, A M	562 W 7th,	University of Pennsylvania
Bruehl, Gustave	367 John,	University Ludovici Bavaria
Burhaus, Chas A.	84 Clark,	Ohio Medical College
Caldwell, Frank	138 W 7th,	Ohio Medical College
Caldwell, J S	192 W 7th.	Miami Medical College
Castle, C H	500 Colerain ave.,	Miami Medical Coll.
Carr, L C	4th and Smith,	Ohio Med. Col.
Carson, Wm	63 E 4th,	University of Pennsylvania
Comegys, C G	266 Elm,	University of Pennsylvania
Culbertson, J C	199 W 7th,	Bellevue Hosp. Med. Col.
Dandridge, N P	63 W 8th,	Col. of Phys. & Surg., N.Y.
Davis, John	323 Elm,	Miami Medical College
Davis, Wm B	9th and Elm,	Miami Medical College
Davis, Clark W.	9th and Elm,	Miami Medical College
Davy, R B	San Diego, Cal.,	Jeff. Medical College
Dewitt, W H	Mt. Auburn City,	Miami Med. College
Dorschug, F P	Molitor,	Miami Medical College
Dun, W A	70 E 4th,	Miami Medical College
Eichberg, Joseph.	7th and Cutter,	Miami Medical College
Falls, W H	7th near Smith,	Miami Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Fischer, Philip	130 Laurel	University of Wurzburg
Fishburn, C D	70 McMicken ave,	Jefferson Med. Col.
Groesbeck, H	E Walnut Hills,	Ohio Medical College
Goode, B P	444 Baymiller,	Ohio Medical College
Goode, G H	8th and Elm,	Miami Medical College
Gores, F C	417 Broadway,	Miami Medical College
Holmes, C R	126 W 7th,	Miami Medical College
Heighway, A E	86 W 7th,	Ohio Medical College
Hendley, F W	8th near John,	Ohio Medical College
Judkins, C P	214 Race,	Miami Medical College
Langdon, F W	65 W 7th,	Miami Medical College
McCoy, T J	San Diego, Cal.,	Miami Medical College
McReynolds, W H	90 Clinton,	Ohio Medical College
Mackenzei, J C	163 W 7th,	Ohio Medical College
Miles, A J	114 W 7th,	Ohio Medical College
Murphy, John A.	163 W 7th	Medical College of Ohio
Marsh, F O	646 Main,	Miami Medical College
Oliver, John C	266 Elm	Miami Medical College
Rover, W H	John & Melancthen,	Miami Med. Col.
Ricketts, B M	93 E 4th,	Miami Medical College
Sattler, Robt	64 W 7th	Miami Medical College
Sattler, Eric E	Richmond near Mound,	Miami Med. Col.
Stevens, E S	N WC Findley&Freeman,	Mi. Med. Col.
Sayres, K B	70 W 7th,	Miami Medical College
Stanton, Byron	157 Dayton,	Miami Medical College
Taylor Wm H	329 W 7th,	Medical College of Ohio
Thompson, J A	Clark & John,	Miami Medical College
Thrasher, A B	140 W 7th,	Ohio Medical College
Toms, F D	321 W 4th,	Rush. Medical College
Zenner, Philip	335 W 7th,	Miami Medical College
Williams, E	64 W 7th,	University Louisville

Clark County Medical Society.

Beach, T M	Catawba,	Starling Medical College
Bell, R L	Springfield,	Med. School Harvard Univ.
Brarrere, D M	New Carlisle,	Miami Medical College
Buckingham, J M.	Springfield,	Jefferson Medical College
Collins, M H	South Charleston,	Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Carroll, T M	Springfield,	Cin'ti Coll. Med. & Surg.
Deegan, J P	Springfield,	Miami Medical College
Dimond, H C	Springfield,	Med. Dep't Univ. of Pa.
Hall, W W	Springfield,	Miami Medical College
Harris, E C	Clifton,	
Harris, J M	Yellow Springs.	
Hazzard, J S R	Springfield,	Cin'ti Coll. Med. & Surg.
Kay, C H	Springfield,	Miami Medical College
Kay, Isaac	Springfield,	Starling Medical College
Kennan, J G	Springfield,	University of Michigan
Kilgore, J M	New Moorefield	
Kennedy, I	New Moorefield	
King, T D	Springfield,	Med. Dep't Univ. of Pa.
Hulick, J W	Springfield,	Ohio Medical College
Lisle, J D	Springfield,	Jefferson Medical College
Marquart, Wm.	Springfield,	Cleveland Medical College
Mitchell, A W	Dialton,	Cincinnati Coll. Med. & Surg.
Morrison, J W	Springfield,	University of Michigan
Myers, E	Springfield,	Medical College of Ohio
Myers, J E	Donnelsville,	Medical College of Ohio
Nelson, J W	Springfield,	Columbus Medical College
Reeves, W H	Springfield,	Starling Medical College
Reade, T M	Springfield,	St. Louis Medical College
Rodgers, J H	Springfield,	Med. Dep't Univ. of Pa.
Seys, H H	Springfield,	University of Maryland
Swayne, J	Springfield,	Starling Medical College
Smith, E H	Vienna X Roads	

Clermont County Medical Society.

Kennedy, J C	Batavia,	Ohio Medical College
Ashburn, A W.	Batavia,	Ohio Medical College
Anderson, W S.	Newtonsville,	Starling Medical College
Anderson, F M	Newtonsville,	Ohio Medical College
Darby, F H.	Morrow,	Ohio Medical College
Spence, Colon	Perin's Mills,	Ohio Medical College
Brown, H M.	Hillsboro,	Ohio Medical College Bellevue Med. College
Belt, R C.	Milford,	Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Bennett, C A	Withamsville,	Ohio Medical College
Thompson, W E	Bethel,	Cin. Col. Med. and Surg.
Moore, A C	Amelia,	Starling Medical College
Marsh, J O	Madisonville,	Ohio Medical College
Medaris, L H	Owensville,	Ohio Medical College
Mitchell, T A	Owensville,	Ohio Medical College
Ellsbery, W S	Bethel,	Ohio Medical College
Kincaid, W P	New Richmond,	Ohio Medical College
Mullen, T J	New Richmond,	Ohio Medical College
Dickinson, T F.	Edenton,	Ohio Medical College
Morris, A	Goshen,	Ohio Medical College
Hulick, Jno W.	Springfield,	Ohio Medical College
Witham, Sam'l L.	Newton,	Ohio Medical College
Andrews, J H	Goshen,	Ohio Medical College
Erdman, R F	New Richmond,	Miami Medical College
Kennedy, Chas L.	Laurel,	Ohio Medical College
Kennedy, P	Laurel,	Ohio Medical College
Hill, N S	Neville,	Ohio Medical College
McKibben, C T	Moscow,	One course Ohio Med. Col.
Spence, C T	Elmwood Place,	Miami Medical College
Mendenhall, J W.	Marathon,	One course, Ohio Med. Col.
Richardson, J P	Bantam,	Ohio Medical College
Moore, Eugene L.	Amelia	
Davy, R B	Cincinnati	
Barnes, W A	New Hope	
Storpe, W J	Hamersville	
Scott, Thos L	New Hope	
Walton, C C.	Marathon,	Ohio Medical College
Love, J H.	Hamersville	
Wheeler, J A	Olive Branch	
Love, ——	Higginsport	
Redrow, Isaac	Williamsburg	
Donham, H L	Mt. Washington	
Combs, J S	Owensville,	Ohio Medical College
Lyman, D S.	Goshen	
Scoville, S L.	Lebanon	
Gordon, Thos W.	Georgetown	
McCasky, H.	Hamersville	
Fee, E B	Georgetown	
Willis, H P	Brookfield	
Tucker, W E.	Felicity	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Carmichael, W A.	Loveland,	Ohio Medical College
McKee, A B	Felicity	
Bryan, A S	Pt. Pleasant	
Bishop, L W.	Batavia,	Ohio Medical College
Reem, S W...	Batavia	
Curry, F C	Milford	
Dickey, J A..	Goshen,	Ohio Medical College
Bishop, L W Jr	Loveland,	Ohio Medical College
Hines, Geo. L..	Williamsburg	
Canter, S A..	Pt. Isabel	
Bradley, Ed.	Felicity	
Abbott, Julius D..	Bethel	
Collins, A R.	Darbyville	
Scott, Thos	New Hope	
Terwillegar, T R..	New Richmond,	Ohio Medical College

Cuyahoga County Medical Society.

Allen, Dudley P	177 Euclid Ave.,	Harvard Univ.
Arms, Charles C	Euclid Ave.,	Jefferson Medical College
Ashmun, G C	178 Republic St.,	Cleveland Med. Coll.
Baker, A R	143 Euclid Ave.,	West. Reserve Univ.
Bard, I W	1361 Lorain St.,	West. Reserve Univ.
Brooks, M L	289 Prospect St.,	Medical Coll. of Ohio
Buffitt, L	143 Euclid,	
Burton, E D	Collamer, O.	
Burton, F D	Collamer, O.,	West'n Reserve University
Burns, J E	526 Detroit St.,	Med. Dep't Wooster U'y
Bennitt, John	120 Euclid Ave.,	Cleveland Med. Coll.
Butler, C R	519 Euclid Ave.	
Carlisle, I C	Glenville, O.	
Carpenter, A B	143 Euclid Ave.,	Med. Dep't Wooster U'y
Case, Guy B	20 Euclid Ave.,	Med. Dep't Wooster U'y
Chadwick, L S	1930 Euclid Av.,	Med. Dep. Wooster U. & West. Reserve Univ.
Chalfant, C M	336 Pearl St.,	West. Res. University
Clark, F H	8 Euclid Ave.,	University of New York
Cook, A J	780 Broadway,	West. Res. University

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Corlett, W S	143 Euclid,	Med. Dep. Wooster Univ. and L. R. C. P., London
Cushing, H K	20 Euclid,	Med. Dep't Univ. of Pa.
Dutton, C F	143 Euclid,	Bellevue Hosp. Med. Coll.
Eyer, Alvin	19 Euclid,	Detroit Medical College
Farnsworth, G B.	Brooklyn Village,	Med. Dep't Wo. U'y
Franke, F. C	533 Woodland Ave.,	Clevel'd Med. Coll.
Gentsch, Charles	780 Lorain St.,	Georgetown Univ., D. C.
Gordon, O F	143 Euclid,	West. Reserve University
Gross, J H	5 Euclid,	University of Pennsylvania
Hanson, D F	1419 Broadway.	
Hart, A S	57 Jennings Ave	
Hawley, E P	1646 Broadway.	
Heath, J A	Wilson, cor. of Marquette,	Wooster U'y
Herrick, H J	Cor. Huron & Erie,	Rush Med Coll., Chi.
Himes, I N	177 Euclid Av.,	Col. Phys. & Surg., N. Y.
Hintzelman, C	228½ Lorain St.,	Wooster University
Hobson, J F	East Rockport,	
Holliday, B W	2588 Broadway,	West. Res. University
Humiston, W H	1066 Pearl St.,	Long Island Hosp.
Isom, J F	110 Public Square,	West. Res. Univ.
Jenks, W O	Nottingham.	
Jones, J S	1936 Harvard St.,	West. Res. Univ.
Kelley, S W.		
Kitchen, H W	Court House,	Western Res. University
Kolb, M G	1007 Pearl St.	Western Res. University
Krause, B	121 Woodl'd Av.,	U'y of Göttingen, Ger.
Lathrop, J M	Dover.	
Lee, H J	385 Prospect St.,	Med. Dep't Woo'r U'y
Leick, Geo. F	Prospect St	
Lowman, J H	345 Prospect St,	Med. Dep't Woo'r U'y
Millikin, B L	343 Prospect St.,	University of Penn'a
Morrison, Caroline.	2638 Broadway,	Med. Dep't Woo'r U'y
Morton, F J	971 Lorain St.,	Long Island Col. Hosp.
McQuiston, H	1918 Walker St.,	West. Res. University
Norton, F B	2626 Broadway,	West. Res. University
Noland, I N	Independence, O.	
Parker, C B	352 Erie St.,	Wooster Univ., Cleveland
Perkins, D S.	1226 Euclid Ave.,	West. Res. Univ.
Perrier, J	360 St. Clair St.,	McGill U'y, Montreal
Powell, H H	467 Prospect St.,	Med. Col. Richm'd, Va.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Preston, J C	311 Cedar Ave., West. Res.	University
Reynolds, R R	89 Seeley Ave	
Rogers, H W	265 Franklin Av., U'y Buffalo,	Med. Dep.
Russell, G C	247 Erie St., Wooster U'y	Med. Dep't
Sabin, T M	Bedford	
Sawyer, P H	637 Streator Ave., West. Res.	University
Schwendener, Hattie,	1090 Pearl St., West. Res.	University
Scott, W J	487 Prospect St.	
Scott, Annie K.	726 Oliver St., Cleveland	Medical Coll.
Sherman, H G	387 Superior, Col. Phys. & Surg.,	N.Y.
Sihler, C	327 Pearl St.,	University of Michigan
Smith, D B	20 Euclid Ave., West. Res.	University
Smith, J T	Collinwood	
Stevenson, G W	1023 Woodland Ave., West. Res.	Univ.
Strong, Jamin	Asylum for Insane, West. Res.	Univ.
Sykora, Joseph	1453 Broadway, West. Res.	University
Thayer, Proctor	44 Public Square, West. Res.	University
Tuckerman, L B	38 Garden St., Long Island	Coll. Hosp.
Turner, C A	228½ Detroit St., University	of Mich.
Vance, R A	304 Prospect St., Bellev. Hosp.	Med. Col.
Vogt, D F	309 Broad'y, Hosp. Col. Med.,	Louisv., Ky.
Weidenthal, N	269 Woodland, Med. Dep't	Woos. U'y

Columbus Medical Club.

Adams, D P	Columbus,	Medical College of Ohio
Baldwin, J F	Columbus,	Jefferson Medical College
Early, L M	Columbus,	Jefferson Medical College
Gerhardt, J H	Sunbury,	Columbus Medical College
Guerin, L F	Columbus,	Starling Medical College
Hoglan, G W	Columbus,	Cin Col. of Med. & Surg.
Homes, W W	Columbus,	Columbus Medical College
LeCrone, S M	Columbus,	Starling Medical College
McKinley, L W	Columbus,	Jefferson Medical College
Montgomery, C R.	Columbus,	Columbus Medical College
Nash, W H H	Columbus,	Bellevue Hosp. Med. Col.
Wagenhals, F S	Columbus,	Starling Medical College
White, G M	Columbus,	Starling Medical College
Wissinger, T K	Columbus,	Starling Medical College
Wright, J W	Columbus,	Cin. Col. of Med. and Surg.

Defiance Co. Medical Association.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Powell, W S	Defiance,	Jefferson Medical College
Berchtold, A	Defiance,	Berne
Stevens, M B	Defiance,	Michigan University, Bellevue Hos. Med. Col.
Harris, W T	Ayersville,	Bellevue, N. Y.
Thacker, C G	Defiance,	Bellevue Hos. Med. Col.
Lesnet, J V	Mont Pelier,	Wooster Med. Col.
Finch, R W	Defiance,	Starling Medical College
Reynolds, J J	Defiance,	Detroit Medical College
Zeigler, H H	Ayersville,	University of Michigan
Slocum, Chas E	Defiance,	Col. of Phys. & Surg. N.Y.
Coy, M C	Evansport,	Col. of Phys. & Surg. Balti.
Ralston, W H	Defiance,	University of Michigan
Hoover, Kate	Defiance,	Women's Med. Col. of Phil.

Delamater Med. Asso., Norwalk, Ohio.

Allen, Dudley	Oberlin,	Jefferson Medical College
Burt, Franklin	Norwalk,	University of Toronto, Cana.
Cott, Geo F	Norwalk,	Buffalo, N. Y.
Culbertson, Elias	Havana, Huron Co.,	Wooster Med. Col.
Ford, J B	Norwalk,	Ann Arbor, Mich.
Gordon, P A	Milan,	Cleveland Medical College
Hershiser, A E	Wakeman,	Jefferson Medical College
Kreider, C L	Monroeville,	Universiry of Pennsylvania
Lanterman, Geo S.	Bellevue,	Ann Arbor, Mich.
Martin, Edgar	Norwalk,	Cleveland Medical College
Martin, F D.	Norwalk,	Cleveland Medical College
Noble, C D	Oberlin,	University of Louisville, Ky.
Osborn, A L	Norwalk,	Cleveland Medical College
Prentis, O	Norwalk,	Eclectic, Cincinnati
Patterson, J W	Norwalk,	Cleveland Medical College
Read, A N	Norwalk,	Jefferson Medical College
Richards, C C	Bellevue,	Cleveland Medical College
Severance, R A	Bellevue,	Bowdoin College, Me.
Stork, A B	Milan,	Keokuk, Iowa
Schneerer, F W	Norwalk,	Eclectic, Cincinnati
Vail, D W	Norwalk,	Cleveland Medical College

Geauga County Medical Society.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Chapel, Elias S	East Claridon,	University of Buffalo
Chidester, C B	Burton,	Baltimore Medical College
Camp, H M	Huntsburgh,	Med. Dep't W. Res. Uni.
Dimmick, O A	Chardon,	Ann Arbor, Mich.
Fairbanks, Wm F	Montville,	Med, Dep't W. Res. Uni.
Fenton, H M	Welshfield,	Med. Dep't W. Res. Uni.
LeRoy, B R	Chagrin Falls,	Med. Dep't W. Res. Uni.
Pomeroy, Orange	Chardon,	Cin. Col. Med. & Surg. Bellevue Med. College
Pomeroy, F S	Chardon,	Med. Dep't Wooster Uni. University New York City
Proctor, D G	Thompson,	Med. Dep't W. Res. Uni. Jefferson Medical College
Quirk, Howard W.	Burton,	Med. Dep't Wooster Uni.
Strickland, Wesley	Burton	Jefferson Medical College
Scidel, C T W	East Claridon,	Med. Dep. W. Res. Uni.
Warner, Albert D.	Fullertown,	Med. Dep't Uni. Wooster

Erie County Medical Society.

Cook, F M	Sandusky,	West Res. Wooster Uni.
Cook, A F	Sandusky,	University of Michigan
Esch, Wm J	Milan,	West Reserve Wooster Univer.
Graefe, Wm	Sandusky,	Ch. Hosp. Med. Col., Cleve.
Graefe, Chas.	Sandusdy,	West Res. of Wooster Uni.
Nees, Ralph W	Sandusky,	University of Michigan
Szendery, Alois	Sandusky,	University of New York
Szendery, Louis S.	Sandusky,	Starling Medical College
Stanley, Elwood	Sandusky,	West. Res. Wooster Uni.
Tuttle, Carl	Berlin Heights,	W. Res. Wooster Uni.

Harden County Medical Association.

Philips, Wm H	Kenton,	Rush Medical College
Bain, F D	Kenton,	Bellevue Hosp. Med. College
Evans, J B	Ada.	Fort Wayne Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Levan, D H	Mt. Victory,	Jefferson Medical College
Snodgrass, Jesse	Kenton,	Bellevue Hos. Med. College
Swimley, W A	Patterson,	Cincinnati Medical College
Hiestand, E B	Kenton,	Starling Medical College
Hiestand, H E	Kenton,	Ohio Medical College
Humphries, Frank	Mt. Victory,	Columbus Medical College
Chesney, Wm M.	Kenton,	Starling Medical College
Stansel, J A	Forest,	Miami Medical College
Campbell, L W	Ada,	Rush Medical College
Smith, L C	Dunkirk,	Miami Medical College
Banning, J C	Roundhead,	Miami Medical College
Hetrick, J S	North Washington,	
Rogers, J A.	Kenton,	Ohio Medical College
Glenn, L G	Kenton.	

Harrison County Medical Society.

Burgess, Will M	New Athens,	Louisville Medical Col.
Colville, Geo H	Harrisville,	Columbus Medical College
Cobb, Chas	New Athens.	
Copeland, W H	Hopedale,	Bellevue Hosp. Med. Col.
Duff, J S	Cadiz,	Columbus Medical College
McGrew, J A	New Athens,	Col. of Phys. & Surg., Bal.
McGavran, S B	Cadiz,	Med. Dep't Wooster, Cleve.
McCoy, W V	New Athens,	Col. Phys. & Surg., Bal.
Welch, G C	Cadiz,	Charity Hosp, Med. Col. / Med. Dep't Wooster Univ.
West, J D	Hopedale,	Rush Medical College
Scott, R E.	Bowerston,	Long Island Col. Hosp.
Snider, D J	Scio,	Cincinnati Col. Med. & Surg.

HEMPSTEAD MEMORIAL ACADEMY OF MEDICINE.

Adamson, T J	Quincy, Ky.,	Cleveland Med. College
Andre, O C	Piketon,	Medical College of Ohio
Allard, L D	Flat P. O.	Medical College of Ohio
Beard, H C	Lucasville,	Medical College of Ohio
Cotton, D B.	Portsmouth,	Jefferson Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Coates, B F	Portsmouth,	Jefferson Med. Col. Ohio Med. College
Crawford, J N W.	Portsmouth,	Ohio Medical College
Dennis, Geo. J	Portsmouth,	Miami Medical College
Erdman, R F	Portsmouth,	Miami Medical College
Haldeman, S.S	Sciotoville,	Medical College of Ohio
Kline, P J.	Portsmouth,	Miami Medical College Bellevue Hosp. Med. Col.
McKerrihan, S B.	Portsmouth,	Medical College of Ohio
Finch, C M	Columbus,	Ohio Medical College Bellevue Hosp. Med. Col.
Pixley, M S.	Portsmouth,	Miami Medical College
Ricketts, E S	Portsmouth,	Miami Medical College
Ricketts, G R	Proctorsville.	
Raschig, Wm	Portsmouth,	Miami Medical College
Marshall, G M.	Sciotoville,	Columbus Med. College Bellevue Hosp. Med. Col.
Stillman, F L	Columbus,	Bellevue Hosp. Med. Col.
Taylor, Jas. L	Wheelersburg,	Ann Arbor, Michigan
Taylor, M.	Sciotoville,	Louisville, Ky.
Frizelle, Jas. S.	Buena Vista,	Ohio Medical College
Vaughlers, T J.	Friendship P. O.,	Ohio Medical College
Warwick, J B	Lucasville,	Ohio Medical College
Watts, Wm	Webster, (Iron P. O.).	
Slagel, J	Wheelersburg,	Miami Medical College
Titus, A	Portsmouth,	Cin. Col. of Med. and Surg.

Highland County Medical Society.

Beeson, H A	Leesburg,	Miami Medical College
Boggess, E M.	Sugartree Ridge,	Medical Coll. of Ohio
Brown, H M	Hillsboro,	Medical College of Ohio, Bellevue Hosp. Med. Col.
Brown, R A	New Petersburg,	Medical Col. of Ohio
Conard, G R	New Vienna,	Medical College of Ohio
Chaney, S F	Pricetown,	Starling Medical College
DeHass, T W	Pricetown,	Medical College of Ohio
Dunlap. R S	Greenfield,	Medical College of Ohio
Dwyer, R A	New Petersburg,	Starling Med. College
Duvall, T W	Marshall,	Medical College of Ohio

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Granger, B D	Russells,	Starling Medical College
Granger, F M	Russells,	Medical College of Ohio
Greene, L M	New Lexington,	Miami Medical College
Gray, A L	Tarkio, Kansas,	Medical College of Ohio
Holmes, Enos	Hillsboro,	Starling Medical College
Holmes, B F	Hillsboro,	Starling Medical College
Hook, O C	Fairfax,	Cincinnati Col. of Med. & Surg.
Holmes, I	Lynchburg,	Cin. Col. of Med. & Surg.
Ireland, W E	Washington C. H.,	Starling Med. Col,
Ireland S A	Leesburg,	Starling Medical College
Johnson, A T	New Vienna,	Medical Coll. of Ohio University of Penn.
Leatherman, J W.	Nevin (Danville),	Cleveland Med. Col.
Lafferty, Nelson	Hillsboro,	Starling Medical College
McBride, D N	Rainsboro,	Cin. Col. of Med. & Surg.
Matthews, John W.	Buford,	Starling Medical College
Patterson W S	Hillsboro,	Medical College of Ohio
Russ, R C	Hillsboro,	Brush Medical College
Spees, S J	Hillsboro,	Medical College of Ohio
Shull, A J	Hillsboro,	Medical College of Ohio
Shepard, W W	Hillsboro,	Medical College of Ohio
Srofe, W J	Lynchburg,	Medical College of Ohio
Trimble, R L	New Vienna,	University of Pennsylvania
Thomas, F M	Samantha,	Cin. Col. of Med. and Surg.
Wilson, W U	Greenfield,	Medical College of Ohio
Wilson, J L	Greenfield,	Medical College of Ohio
Whistler. H	Antioct,	Starling Medical College
VanWinkle N B	Blanchester,	Miami Medical College
Miller, J M		Not a Graduate
Matthews, C	Hillsboro,	Not a Graduate
Sutton, Robert	Lynchburg,	Not a Graduate
Quinn, T C	New Vienna,	Not a Graduate
Thompson, J M		Not a Graduate
McNulty, J H	Belfast,	Not a Graduate
McNulty, S J	North Union,	Not a Graduate
Bryant, A S	Point Pleasant,	
Fulton, D R	Lynchburg,	Practitioner
Smith, I L	Sinking Springs,	Practitioner
Vance, C E	New Market,	Starling Medical College

Holmes County Medical Society.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Bair, A C	Winesberg,	Med. Dep't Wooster Univ.
Bigham, J G . . .	Millersburg,	Jefferson Medical College
Carson, F D . . .	Benton,	Cleveland Medical College
Cherryholmes, W K.	Millersburg,	Col. Phys. & Surg., N. Y.
Courtwright, W S.	Holmesville,	Ohio Medical College
Crump, A A., Jr.	Millersburg,	Med. Dep't Wooster Univ.
Crump, A A., Sr.	Millersburg,	Not a graduate
Elder, W S . . .	Nashville,	Med. Dep't Wooster Univ.
Guitland, A M .	Killbuck,	Med. Dep't Wooster Univ.
Guitland, F J . .	New Bedford,	Jefferson Medical College
Jaybery, Albert .	Mt. Hope,	Cleveland Medical College
Jones, A L . . .	Black Creek,	Cleveland Medical College
Jones, Hiram S .	Clark's P.O.,	Med. Dep't Wooster Univ.
Krantz, A C . .	Winesberg,	Ohio Medical College
Loller, R P . . .	Holmesville,	Med. Dep't Wooster Univ.
Luke, E J	New Carlisle,	Cleveland Medical College
March, E C . . .	Nashville,	Baltimore Medical College
Mast, J A	New Carlisle,	Med. Dep't Wooster Univ.
Metzler, A S . .	Baltic.	
Olmstead, D S. .	Millersburg,	Med. Dep't Wooster Univ.
Pomerene, P P . .	Berlin,	Jefferson Medical College
Shalliol, Peter . .	Winesberg,	Ohio Medical College
Snyder, Simon P.	New Bedford,	Med. Dep't Wooster U'y
Teters, B F . . .	Berlin,	Jefferson Medical College
Whitmar, J E . .	Mt. Hope,	Med. Dep't Wooster Univ.
Wilson, T R. . .	Clark's P.O.,	Columbus Medical College
Wise, S P	Millersburg,	Coll. Phys. & Surgs., N. Y.

Jefferson County Medical Society.

Blackburn, A M .	Steubenville,	Ohio Medical College
Bozman, H E . .	New Alexander,	Dartmouth
Collins, J W. . .	Toronto,	Columbus Medical College
Elliott, A A . . .	Steubenville,	University City, N. Y.
Floyd, J C M . .	Steubenville,	Long Island Hos. Med. Col
Fisher, B H. . .	Steubenvile,	Ohio Medical College
Gregg, Melvin,. .	Knoxville,	Columbus Medical College
Hill, M D. . . .	Steubenville,	Cleveland Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Kerr, J W. . . .	Richmond,.	Long Island Hos. Med. Col.
Nelson, H W . .	Steubenville, .	Jefferson Medical College
Pearce, Enoch . .	Steubenville, .	Jefferson Medical College
Robertson, Joseph.	Steubenville..	Columbus Medical College
Watt, J M	Toronto, .	Long Island Hos. Med. Col.
Wayble, T H . .	Steubenville,.	Cleveland Medical College
White, Leonidas .	Wintersville, .	Jefferson Medical College

Lake County Medical Society.

Amidon, Rebecca.	Painesville, .	Med. Dep't W. Res. Uni.
Axtell, S B . . .	Painesville, .	Med. Dep't W. Res. Uni.
Bixby, C B . . .	Mentor, . .	Cleveland Medical College
Buys, Frank . . .	Painesville, .	Med. Dep't W. Res. Uni.
House, C F . . .	Painesville, .	Long Island Med. College
Merriman, D J. .	Painesville. . .	Detroit Medical College
Moore, F M . .	Willoughby,.	Med. Dep't W. Res. Uni.
Root, E B . . .	Painesville, . .	Albany Medical College
Sherwood, Wm H.	Painesville, .	Med. Dep't W. Res. Uni.
Sherwood, W H .	Unionville, . .	Med. Dept. W. Res. Uni.
Stockham, A H .	Madison,.	Cincinnati School of Medicine

Lebanon Medical Society.

Adams, Jno. M. .	Cincinnati.	
Bishop, L	Loveland,. . . .	Ohio Medical College
Bishop, N W. . .	Loveland,. . . .	Ohio Medical College
Collins, J B . . .	Butlerville, ...	Practitioner
Cottle, L A . . .	Maineville, . . .	Ohio Medical College
Couden, J M . .	Lebanon.. . . .	Ohio Medical College
Couden, J T.. . .	Morrow,.	Practitioner
Darby, F H.. . .	Morrow, ...	Ohio Medical College
Drake, J L. . . .	Lebanon, . . .	Miami Medical College
Frost, F H . . .	Lebanon, .	Med. Dep't. Howard Univ.
Graham, W T . .	Lebanon, ...	Ohio Medical College
Graybill, J K. . .	Norwood,. . . .	Ohio Medical College
Hough, J B . . .	Waynesville,. .	University of Michigan
Johnson, Wm. . .	Lebanon.	
Krieger, G L. . .	Milldale,. . .	University City of N. Y.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Moss, W F	Maineville,	Starling Medical College
Mounts, J L.	Morrow,	Starling Medical College
Macready, Jas.	Monroe,	Ohio Medical College
Pampell, L.	Cozaddale,	Ohio Medical College
Scoville, S S	Lebanon,	Cin. Col. of Med. and Surg.
Sellers, Adam	Covington, Ky.,	Practitioner
Stevens, A S.	King's Station,	Ohio Medical College
Stevens, E B	Lebanon,	Ohio Medical College
Stevens, E S.	Lebanon,	Miami Medical College
Fichenor, E J	Lebanon,	Ohio Medical College
Vandervoort, J W.	Harveysburg,	Ohio Medical College Bellevue Hosp. Med. Col.
Welsh, F J	Bloomington, Ills.,	Ohio Med. Col.
Wright, J M.	Red Lion,	Ohio Medical College

Licking County Medical Society.

Alexander, J W.	Newark,	Starling Medical College
Brooke, J W.	Newark,	Starling Medical College
Black, J R.	Newark,	University of N. Y.
Carter, W W	Newark,	Ohio Medical College
Davies, W C.	Granville,	Col. of Phys. and Surg., N. Y.
Follett, A.	Granville.	
Garrison, G W.	Utica,	St. Vincent Medical College
Hughes, E J.	Newark,	University of Michigan
King, P C.	Newark,	Jefferson Medical College
Kyle, G G.	Granville,	Starling Medical College
Larimore, James.	Newark,	Cin. Col. of Med. and Surg.
Mattingly, J N.	Newark,	Ohio Medical College
Priest, S C.	Newark,	Ohio Medical College
Speer, A T	Newark,	Ohio Medical College
Spencer, B F.	Newark,	Ohio Medical College
Sinnett, E.	Granville,	Cleveland
Shipp, G L	Newark,	University of Maryland
Watering, J	Newark,	University of Pennsylvania
Watkins, J	Granville,	Edinburg, Scotland
Allen, P C.	Utica	
Brown, E S	Newark	
Hedrick, C W.	Newark	
Lecrone, L W.	Hebron	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Rankin, T W	Kirkersville	
Rogers, Jos	Utica	

Mahoning County Medical Society.

Barnes, R H	Youngstown,	Jefferson Medical College
Booth, C C	North Jackson,	West. Res. University
Campbell, Daniel	Canfield,	Cleveland Medical College
Clark, M S	Youngstown,	Med. Dep't Univ. of Mich.
Cone, J E	Youngstown,	Med. Dep. Univ. of Iowa
Cunningham, J S	Youngstown,	Jefferson Medical College
Detchon, S E	Mantua.	
Foster, Wilmarth	Youngstown,	Detroit Medical College
Gibson, R D	Youngstown,	Cleveland Medical College
Hawn, H H	Youngstown,	Long Island Coll. Hosp.
Kline, —	Youngstown,	Col. Phys. & Surgs., Balto.
Kotheimer, J B	Brier Hill,	Med. Dep't Wooster Univ.
Louis, J J	Hazelton,	University of Michigan
McCandless, M D	Youngstown,	Jeff. Med. Col. & U'y Mich.
McCurdy, J	Youngstown,	Cleveland Medical College
Thomas, J J	Youngstown,	Jefferson Medical College
Werner, W A	Austintown,	Med. Dep. West. Res. U'y
Whalen, W J	Youngstown,	Chicago Medical College
Whitslar, W H	Youngstown,	Rush Medical College
Wilson, A C	Youngstown,	Med. Dep't Wooster Univ.
Woodbridge, J E	Youngstown,	Med. Dep. West. Res. U'y
Woodbridge, T	Youngstown.	

Marion County Medical Society.

Bowdish, R C	Big Island,	Western Reserve University
Briggs, C J	Cochranton,	Western Res. University
Britton, S H	Claridon,	Western Reserve University
Crane, A M	Marion,	Columbus Medical College
Davis, B W	Marion,	Hon. member of Wooster Univ.
Denman, W C	Marion,	Ohio Medical College
Hamilton, L D	Marion,	Columbus Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Hipple, J R . . .	Waldo, . .	Columbus Medical College
Martin, J T . . .	Green Camp,	Cin'ti Coll. Med. & Surg.
McConnels, D W.	Marseilles, . .	Starling Medical College
Modrack, J C . .	Marion,	U'y Berlin, & Starling Med. Coll.
Mouser, J A . . .	LaRue, ...	Ohio Medical College
Rhu, A	Marion, . .	Western Reserve University
Shira, William . .	LaRue,	Bellevue Hospital Med. College
Stone, W S . . .	Caledonia, . .	University of Louisville
Sweeney, R L . .	Marion, . .	Western Reserve University
Thomas, F W . .	Marion, . . .	Starling Medical College
Uhler, H L . . .	Marion, . . .	Jefferson Medical College
Vannata, H L . .	Wyandot,	Col. Phys. & Surg , Baltimore
Weeks, O W . .	Marion,	Cin'ti College Med. & Surg. and Columbus Med. College

Meigs County Medical Society.

Reed, C R . . .	Middleport, .	Jefferson Medical College
Stanley, H . . .	Rutland, . . .	Starling Medical College
Day, S	Harrisonville, .	Starling Medical College
Smith, J B . . .	Syracuse, . . .	University Pennsylvania
Rathburn, D C. .	Middleport, . .	Miami Medical College
Knight, A L. . .	W. Columbia,	W. Va., Cleveland Med. C.
Hoff, J W . . .	Pomeroy, . .	Jefferson Medical College
Barton, T H . . .	Syracuse, ...	Not a Graduate
Roush, L F . . .	Letart, W Va, .	Miami Medical College
Hysell, J H . . .	Pomeroy, ...	University of Buffalo
Day, Howard . .	Harrisonville, .	Starling Medical College
Hartinger, D S .	Middleport, . .	Medical College of Ohio
Wilson, E F . .	Pomeroy, . . .	University Pennsylvania
Crary, A	Hartford City,	W Va., Starling Med. Col.
Green, C C . . .	Racine, ...	Under Graduate
Rine, E W . . .	Long Bottom..	Starling Medical College
Ackley, Benj . .	Pomeroy, . . .	Starling Medical College
Russell, J N . . .	Mason City,	W Va., Baltimore Med. C.

Miami Co. Medical Chirurg. Society.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Wright, T M	Troy,	Kentucky Medical College
Senour, John	Troy,	Bellevue Hos. Medical Col.
Thompson, W R	Troy,	Uni. of Michigan Med. College
Calvin, J W	Troy,	Rush Medical College
Sterrett, John	Troy,	Miami Medical College
Coleman, Horace	Troy,	Ohio Medical College
Meeks, I N	Troy,	
Lindenberger, L M	Troy,	Bellevue Hosp. Med. Col.
Alff, Louis	Piqua,	Berlin, Germany
Hartman, S D	Tippecanoe City,	Uni. Mich. Med. Col.
Swisher, A B	Casstown,	Miami Medical College
Kessler, W H	West Milton,	Cin. Med. Col. & Surg.
Brandon, J P.	Laura, Miami Co.,	Bellevue Hos. Med. C.
Gennings, Gainer	West Milton,	Cin. Col. Med. & Surg.
Dickson, C M	Brandt,	Uni. of Michigan Med. Col.
Deehofe, S P	Potsdam,	Ohio Medical College
Evans, E R	Troy,	Bellevue Hosp. Med. College
Stonebarger, Wm.	Tippecanoe City,	Miami Medical College
Smith, W S	West Milton,	

Monroe County Medical Society.

Armstrong, T H.	Woodsfield,	Starling Medical College
Bell, J C	Stafford,	Keokuk Medical College
Dennie, B.	Beallsville,	Starling Medical College
Farquhor, I P	Woodsfield,	Miami Medical College
Jackson, J D.	Cameron,	Starling Medical College
Griffith, S D.	Jerusalem,	Starling Medical College
Grimes, J W.	Woodsfield,	Starling Medical College
Lapp, J G.	Laings,	Not a graduate
Mason, G W	Stafford,	Not a graduate
Mason, J L	Stafford,	Ohio Medical College
Parry, J R.	Graysville,	Ohio Medical College
Rae, T J	Sordis,	Not a graduate
Read, J N.	Beallsville,	Ohio Medical College
Rosenberry, H L.	Miltonsburg,	Starling Medical College
Steward, G W.	Jerusalem	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Way, J R	Way,	National Medical College
Webber, J W	Lewisville,	Starling Medical College
Webb, G W.	Cameron	

Miami County Medical Society.

Anderson, W S	Newtonsville,	Starling Medical College
Andrews, J H	Goshen,	Ohio Medical College
Bishop, N W	Loveland,	Ohio Medical College
Bishop, L W	Loveland,	Ohio Medical College
Bishop, L W.	Batavia,	Ohio Medical College
Carmicheal, W A.	Loveland,	Ohio Medical College
Combs, J S	Owensville,	Ohio Medical College
Cottle, L A	Maineville,	Ohio Medical College
Collins, J B	Butlerville,	Ohio Medical College
Couden, J T.	Morrow	
Conard, Geo. R	New Vienna	
Couden, J M.	Lebanon,	Ohio Medical College
Dickey, J A.	Cincinnati,	Ohio Medical College
Darby, F H.	Morrow,	Ohio Medical College
Drake, J L	Lebanon,	Miami Medical College
Frost, F H	Lebanon,	Ohio Medical College
Graham, W T.	Lebanon,	Ohio Medical College
Hine, L S.	Linwood,	Ohio Medical College
Highlands, W W.	Newtown,	Ohio Medical College
Johnson, W A.	Morrow	
Kreiger, G L.	Lebanon,	University of New York
Kennedy, J C	Batavia	
Ludlum, Benj. F.	Maineville,	Ohio Medical College
Lyman, D S.	Goshen,	Ohio Medical College
Murphy, A D	Pleasant Plain,	Miami Medical College
Moss, W F	Maineville,	Starling Medical College
Marsh, F O.	Madisonville,	Miami Medical College
Mullen, T J	New Richmond,	Ohio Medical College
McReady, Jas.	Monroe,	Ohio Medical College
Marsh, J O	Madisonville,	Ohio Medical College
Mitchell, T A	Owensville,	Ohio Medical College
Morris, A	Goshen,	Ohio Medical College
Mounts, J L	Morrow,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Orr, George B	Cincinnati,	Ohio Medical College
Owen, H C	South Lebanon,	Ohio Medical College
Penn, S W	Batavia,	Baltimore
Pampel, L	Cozaddale,	Ohio Medical College
Pugh, G W	New Vienna,	Ohio Medical College
Quinn, F C	New Vienna.	
Quinn, A Z	Wilmington.	Ohio Medical College
Russ, R C	Hillsboro,	Rush Medical College
Robb, Andrew	Blanchester.	
Richardson, J P	Bantam,	Ohio Medical College
Sellers, A	Cincinnati.	
Stevens, E B	Lebanon,	Ohio Medical College
Scoville, S S	Lebanon,	Cincinnati Medical College
St. John, F J	Lebanon,	Ohio Medical College
Scott, William	Loveland,	Ohio Medical College
Sheppard, W W	Ogden,	Ohio Medical College
Spees, S J	Hillsboro.	
Stedman, James	Madisonville,	Royal Col. P. & S., Eng.
Smith, F K	Lebanon,	Ohio Medical College
Stevens, E S	Lebanon,	Miami Medical College
Trimble, R T	New Vienna,	University of Pennsylvania
Tichenor, E J	Lebanon,	Ohio Medical College
Vanwinkle, N B	Blanchester,	Miami Medical College
Wire, G W	Wilmington,	Miami Medical College

Montgomery County Medical Society.

Adams, P N	Dayton,	Starling Medical College
Bailey, V M	620 S. Wayne, Dayton,	Miami Med. Coll.
Carr, J M	223 Detroit, Dayton,	Med. Coll. of Ohio
Conklin, W J	Dayton.	Medical College of Ohio
Conklin, C H	Dayton,	Starling Medical College
Corbin, Lee,	Vandalia,	Medical College of Ohio
Crum, E C	Dayton,	Miami Medical College
Daugherty, J D	118 W. Franklin, Dayton,	Med. Col. of O.
Evans, George B.	Dayton,	Ohio Medical College
Francis, O E	Dayton,	Kentucky Acad. of Medicine
Grube, R H	Nat'l Military Home,	Med. Coll. of Ohio
Gable, A H	Dayton,	Miami Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Goodhue, George.	Dayton,	Dart. Med. Col. & Univ. N. Y.
Greene, D W . .	Dayton.	. . . . .
Humphreys, C H .	1425 E. 3d, Dayton,	Columbia U'y Med. D.
Iddings, A D . .	Dayton,	Bellevue Hosp. Medical College
Jennings, E . . .	Dayton,	. . . Medical College of Ohio
Jewett, H S . . .	21 S. Ludlow, Dayton,	Univ. of Mich.
King, C W . . .	Asylum for Insane,	Ohio Med. College
Klein, C H von .	Dayton,	. . . . . University of Prussia
Lichliter, D C . .	811 E. 5th, Dayton,	Jefferson Med. Coll.
Meyers, G C . .	Dayton.	. Cin. Col. of Med. and Surg.
Pettit, Richard R.	1002 W. 3d, Dayton,	University of Mich.
Pilate, E . . .	148 High, Dayton,	L. I. College Hosp.
Pollock, C	W. 3d, Dayton,	Paris (France) Med. Sch'l
Roseberry, J A .	2419E 3d, Dayton,	Ohio Medical College
Reeve, J C . . .	3d & Wilkinson, Dayt'n,	Med. Col. of Cle'd
Reeve, J C Jr. . .	3d & Wilkinson, Dayton,	Jeff. Med. Coll.
Romspert, J A. .	Dayton,	. . . . Ohio Medical College
Scheibenzuber, A .	124E. VanBur'n, Dayton,	M. D., Univ'y of Vienna Licen. Med. Faculty Vienna Dce. Surg., U'y Graz, Aus. M.A., Obstetricae, U'y Graz
Souders, Samuel .	Dean P. O.,	Bellevue Hos. Med. College
Treon, W P . . .	Dayton.	. . . . .
Weaver, J M . .	111 S Ludlow, Dayton,	Clev'd Med. Col.
Wilson, J B . . .	Dayton,	. . . . Miami Medical College
Beck, J S	Dayton,	. . University of Pennsylvania
Boone, A	Jamton P. O.	. . . . .
Patton, F H . . .	Nat. Military Home,	Jefferson Med. Col.

Morrow County Medical Association.

Bennett, H C . .	Iberia,	. . . Med. Dep't Wooster Uni.
Gunsaulus, C . .	Centerburg,	Knox Co. . . . .
Greaves, J L . . .	Andrews,	. . . University of Wooster
Green, H S . . .	Cardington,	. . Miami Medical College
Howard, C D . .	Marengo.	. . . . .
James, A D . . .	Mt. Gilead.	. . . . .
Nefe, A A . . .	Whetstone,	. . Cincinnati Col. of Med.
Miller, J C . . .	Iberia,	. . . Med. Dep,t W. Reserve
Shaw, H H . . .	Mt. Gilead,	. . Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Shaw, F C	Bennington,	Eclectic Med. Coll., Cin'ti
Tucker, N	Mt. Gilead,	Bellevue Hosp. Med. Col.
Thacher, J W	Marits,	Kentucky School of Med.
Voorhies, L B	Mt. Gilead.	
Williams, J L	Cardington,	Miami Medical College

Muskingum Valley District Med. Society.

Alexander, J	McConnellsville,	Not a Graduate
Barcroft, W H	Coshocton,	Starling Medical College
Bell, A E	Zanesville,	Jefferson Medical College
Bingham, T J	McConnelsville,	Columbus Med. Col.
Brush, E C	Zanesville,	Starling Medical College
Calvin, R A	Avondale.	
Carr, E C	Coshocton,	University of Wooster
Carr, J G	Coshocton,	University of Wooster
Cass, Edward	Dresden,	Jefferson Medical College
Culbertson, H	Zanesville.	Jefferson Medical College
Davis, James	Ringgold.	
Davis, M B	Rossea.	
Davis, J T	Zanesville,	Medical College of Ohio
Emery, G A.	Rendville,	Columbus Medical College
Fassig, J M	Zanesville,	Starling Medical College
Folk, P	Junction City,	Not a Graduate
Frew, W C	Coshocton,	Long Island Hosp. Med. C.
Geyer, J L	Norwich.	
Gordon, P A	Junction City.	
Gue, V H	New Lexington.	
Haldeman, J S	Zanesville,	Starling Medical College
Harris, R D	Corning,	St. Louis Medical College
Hildreth, C C	Zanesville,	Medical College of Ohio
Holcomb, L S	Pennsville.	
Holden, W H	Zanesville,	Starling Medical College
Holden, J L	Zanesville,	Ohio Medical College
Holston, J G F	Zanesville,	Jefferson Medical College
Humphrey, J B	Malta,	Bellevue, N. Y.
Jones, W J	Shawnee.	
Kennedy, G L	Deavertown,	Medical College of Ohio
King, C P	Newark,	Jefferson Medical College
Kyle, Geo G	Granville,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Larimore, J	Newark,	Cin. Col. of Med. & Surg.
Lecrone, L W.	Hebron.	
Lenhart, W C	Zanesville,	Starling Medical College
Logsdon, E C	Zanesville,	Starling Medical College
LaRue, F	Chandlersville.	
Melick, W A	Rosevlle,	Medical College of Ohio
Moody, J A	Junction City,	Not a Graduate
McCurdy, S L	Dennison.	
McDougal, J G	New Lexington,	Medical Col. of Ohio
McTague, N S	Columbus.	
Newton, G A	New Straitsville.	
Norman, P M	Roseville,	Starling Medical College
Noyes, H J	Meigsville.	
Parker, A J	Chesterville,	Medical College of Ohio
Peters, D C	Zanesville,	Medical College of Ohio
Priest, S C	Newark,	Medical College of Ohio
Reamy, L M.	Zanesville,	Georgetown, D. C.
Reed, R Harvey	Mansfield.	
Richards, A	New Lexington,	Cincinnati Med. Col.
Rusk, D	Malta.	Not a Graduate
Shipps,	Newark,	University of Maryland
Snider, J W	New Castle.	
Snyder, S P	New Bedford.	
Speer, A T	Newark,	Medical College of Ohio
Taggart, A	New Lexington,	Cleveland Med. Col.
Thomas, B A	Reesville.	
Tracy, E G	Malta,	Not a Graduate
Walker, G W W.	Roseville,	Not a Graduate
Weller, G M	Zanesville,	Medical College of Ohio
Wright, W	Mountsville,	Miami Medical College
Wright, J H	New Lexington,	Starling Medical Col.
Yarnell, F H	W. Lafayette,	Columbus Medical Col.

North-Central Ohio Medical Association.

Armentrout, J W.	Belleville,	Detroit Medical College
Alban, S N	Perrysville,	Columbus Medical College
Bales, R S.	Lucas,	Charity Hospital, Cleveland
Beecher, J C.	Polk,	Ohio Medical College
Battles, W S.	Shreve,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Budd, A W	Newville,	Cleveland Medical College
Buchanan, J W.	Mansfield,	Kentucky School of Med.
Clark, P H	Ashland,	Buffalo, N. Y.
Cowan, J P	Ashland,	Starling Medical College
Cantwell, I Y	Mansfield,	Cleveland Medical College
Craig, J W	Mansfield,	Cleveland Medical College
Campbell, John	Galion,	Cleveland Medical College
Craig, J Harvey	Mansfield,	Cleveland Medical College
Davis, E B	Kirby,	Cleveland Medical College
Erwin, N B	Gibsonburgh,	Wooster Uni., Cleveland
Erwin, A J	Mansfield,	W. V., Nashville, Tenn.
Edwards, G R	Crestline,	Dep't. Wooster, Cleveland
Ewing, A.	Greenwich,	Cleveland Medical College
Francis, D R	Mansfield,	University Med. Col., N. Y.
Finley, Mary J.	Mansfield,	Womans' Med. Col. of Pa.
Firestone, L.	Wooster,	University of Michigan
Gilson, J M	Crestline,	Columbus Medical College
Green, H S	Cardington,	Miami Medical College
Gibbon, H B	Tiffin,	Cincinnati Col. of Med. and Surg.
Gill, H Z	Cleveland,	Jefferson Medical College
Grabill, F Q	Adario,	Miami Medical College
Huss, Max. H.	Shelby,	Tena, Germany
Havey, B F	Mansfield,	University Med. Col., N. Y.
Hall, H L.	Mansfield,	University Med. Col., N. Y.
Hissem, H Z.	Chicago,	Bellevue Hosp. Med. Col.
Hershiser, J S	New Washington,	Cleveland Med. Col.
Hise, A H	New Washington,	Columbus Med. Col.
Irvin, J W.	Ashland,	Jefferson Medical College
Kennedy, W C.	Mansfield,	St. Louis Medical College
Kelly, H R	Galion,	Starling Medical College
Kinnaman, R C	Ashland,	Cincinnati Medical College
Kelly, Webb. J.	Galion,	Bellevue Hosp. Med. College
Larimore, F C.	Mt. Vernon,	Bellevue Hosp. Med. Col.
Latimer, J P.	Newark,	Balto. Physicians and Surg's.
Laughridge, Wm.	Mansfield,	Miami Medical College
Meyers, I A.	Shelby,	Cleveland Medical College
Markel, S F.	Mifflin,	Jefferson Medical College
Mitchell, Geo.	Mansfield,	Ohio Medical College
Mecklem, Wm. S.	Lucas,	Wooster University, Cleveland
Miller, A A	Cleveland,	Starling Medical College Bellevue Hosp. Med. Col.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Chapman, B	Copley Center,	Western Res. Med. Col.
Conn, Eli	Akron,	Western Res. Med. College
Corlett, Wm T	Cleveland,	University of Wooster
Coyle, J H	Canton.	
Dutton, C F	Cleveland,	Bellevue Hosp. College
Dalton, John C	Shreve.	
Dawson, D B	Amwell.	
Douds, B I	Canton,	University of Wooster
Davison, C C	Akron,	Columbus Medical College
Dougherty, L E	Greentown,	Columbus Med. College
Dissinger, Hiram	Canal Fulton,	Medical College of Ohio
McEbright, T	Akron,	Col. of Phys. & Surg.
Ebright L S	Akron,	Wooster University
Everhard, N S	Wadsworth,	Cleveland Medical Col.
Exline, J W	Canal Dover,	Cleveland Medical Col.
Foltz, A E	Akron,	Wooster University
Ferris, O	Mantua.	
Fraunfelter, James	Canton,	Jefferson Medical College
Firestone, L	Wooster,	Western Res. Med. Col.
Fuller, A B	Loudenville,	Jefferson Medical College
Fouser, A K	Akron,	Medical College of Ohio
Ford, James B	Norwalk,	University of Michigan
Fisher, H M	Akron,	Jefferson Medical College
Ferguson, J W	Akrona,	University of Wooster
Foulkes, M C	Canton,	Jefferson Medical College
Greenamyer, P S.	Smithville,	Jefferson Medical College
Garver, D W	West Salem.	
Gillett, G L	Hinckley.	
Grill, S P	Orrville,	Medical College of Ohio
Gill, H Z	Cleveland,	Jefferson Medical College
Gardner, D S	West Brookfield.	
Howard, E W	Akron,	Berkshire Medical College
Hitchcock, E	Akron,	Western Reserve Med. College
Hudson, S	Medina,	Western Reserve Med. College
Hord, E G	Medina,	Western Reserve Med. College
Hough, W S	Cuyahoga Falls,	Wooster University
Hyatt, W B	Marshallville.	
Hunt, A H	Fort Wayne, Ind.	
Hunter, F S	Ashland,	Jefferson Medical College
Harmon, Julian	Warren,	Western Reserve Med. Col.
Houtz, Henry	Cleveland,	Jefferson Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Hagen, J H	Mashville	
Heath, F S	Cuyahoga Falls	
Herrick, H J	Cleveland,	Rush Medical College
Harmount, S J	Massillon	
Hanson, D	Cleveland	
Hines, I N	Cleveland,	Coll. Phys. & Surg., N. Y.
Houk, G W	Marshallville	
Hamblin, R T	North Royalton	
Humiston, C B	Cleveland,	University of Michigan
Hudson, J H	North Industry,	West'n Res. Med. Col.
Hoover, Albert	Akron,	Jefferson Medical College
Huston, W O	Peninsula,	University of Pennsylvania
Hubbard, R S	Northfield,	Western Reserve Med. Col.
Jacobs, W C	Akron,	Medical College of Ohio
Johnson, R P	Canton,	Cincinnati Col. of Med. & Surg.
Jones, F S	Medina	
Kendig, B B	Haynesville,	Univ'y Med. Coll., N. Y.
Leonard, C S	Ravenna,	Western Reserve Med. Coll.
Lewis, J G	Newburgh	
Lyman, C N	Wadsworth,	Transylvania Univ'y, Ky.
Liggett, George	Wooster,	Medical College of Ohio
Lewis, J M	Cleveland,	Western Res. Med. College
Loughead, B B	Ravenna,	Wooster University
Lanterman, A J	Youngstown,	Col. Phys. & Surg., N. Y.
Lander, L H	Canton,	Jefferson Medical College
Murray, L S	Medina,	University of Wooster
Merriman, C R	Akron	
Miller, J C	Lodi	
Morley, M M	Chatham Center	
Miller, T C	Massillon,	Wooster University
Morton, James	Fredericksburg	
McClean, J S	New Philadelphia,	Bellev. Hos. Med. Col.
Millikin, B L	Cleveland,	University of Pennsylvania
Millikin, C W	Akron,	University of Pennsylvania
McCauley, B M	West Salem,	Jefferson Medical College
Mateer, H N	Wooster,	University of Pennsylvania
McKean, Wm.	Dundee,	University of Wooster
Nash, E K	Montrose,	Western Res. Med. College
Nodine, F O	Cleveland,	Wooster University
Odell, S T	Akron,	Rush Medical College
Price, Joseph	Randolph,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Price, E W	Kent	
Parker, J E	Whittlesy	
Phillips, S H	Canton,	Jefferson Medical College
Palmer, James	Dalton,	Univ. Medical College, N. Y.
Pope, F F H	Dalton,	Wooster University
Proctor, G M	Shalersville,	Western Reserve Med. Col.
Pixley, S	Peninsula,	Western Reserve Med. Col.
Portman, E O	Canton,	Wooster University
Peck, George S	Youngstown,	Wooster University
Perkins, D S	New Baltimore,	Western Res. Med. Col.
Parker, C B	Cleveland,	Wooster University
Pierson, H W	Akron,	Wooster University
Post, S B	Canton,	Jefferson Medical College
Ridenour, A W	Massillon,	Medical College of Ohio
Robinson, J D	Wooster,	Jefferson Medical College
Robinson, J N	Medina,	Western Reserve Med. College
Ruggles, J H	Pike Station	
Reed, T J	Massillon,	Jefferson Medical College
Rowe, D	Akron,	Medical College of Ohio
Roth, C C	Mt. Eaton	
Read, A N	Norwalk,	Jefferson Medical College
Reed, F C	Detroit, Mich.	
Randall, R	Bath	
Reed, R H	Mansfield,	University of Pennsylvania
Richards, F B	Uniontown,	Medical College of Ohio
Rogers, J H	Louisville,	Jefferson Medical College
Rumbough, D W.	Cleveland	
Robinson, S	Canton,	Wooster University
Rosenthall, A A	Akron,	University of Vienna
Russell, F P	Randolph	
Sherman, A M	Kent,	Western Reserve Medical College
Sawyer, P H	East Cleveland,	West. Res. Med. Coll.
Sperry, W	Tallmadge	
Sisler, A	Nimisilla,	Western Reserve Med. Coll.
Scott, X C	Cleveland,	West. Res. Medical College
Spencer, E R	Doylestown,	University of Pennsylvania
Slusser, L	Canton,	Medical College of Ohio
Stull, J H	Orrville	
Scott, W J	Cleveland	
Smith, D B	Cleveland,	West. Res. Medical College
Stouffer, C C	West Salem,	University of Pennsylvania

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Sorrick, J W	Thomastown,	Cin'ti Medical College
Storch, A B	Milan.	
Stone, G L	Hudson,	Bellevue Hosp. Medical Coll.
Strayer, L S	Marshallville.	
Sweitzer, L S	Akron,	Cleveland Medical College
Scott, D A	Akron,	Wooster University
Sisler, William	Akron,	Western Res. Medical College
Smith, A B	Canton.	
Steele, W E	New Berlin.	
Sherman, H G	Cleveland,	Col. of Phys. & Surg. N. Y.
Shively, J W	Kent.	
Taggart, W W	Wooster,	Bellev. Hosp. Medical College
Todd, J H	Wooster,	Western Res. Medical College
Taggart, H D	Akron,	Jefferson Medical College
Thayer, Proctor	Cleveland,	Western Res. Medical College
Tidball, A H	Garrettsville,	West. Res. Med. College
Tuttle, D G	Old Hickory P. O.	
Thomas, J B	Akron,	University of Michigan
Underwood, W J.	Akron,	Jefferson Medical College
Vance, R A	Cleveland,	Bellevue Hosp. Med. Coll.
Wright, Amos	Tallmadge.	
Waggoner, Joseph.	Ravenna,	University of Cleveland
Warrington, E	Atwater,	University of Cleveland
Willey, A G	Spencerville.	
Williams, M L	Vienna,	University of Michigan
Waldron, G F	Uniontown.	
Wise, S P	Millersburgh,	Col. of Phys. & Surg., N.Y.
Wright, S J	Tallmadge,	West. Res. Medical College
Weed, F A	Cleveland,	Wooster University
Walker, A B	Canton,	Jefferson Medical College
Welty, O R	Canal Dover,	Bellevue Hosp. Med. Coll.
Wuchter, Geo. H	Wadsworth,	University of Pennsylvania
Young, Frank	Weymouth,	West. Res. Medical College
Wall, J J	Mallet Creek,	Col. of Phys. & Surg., Cin.
Barnes, S P	Massillon,	Jefferson Medical College
Dougherty, J E	Uniontown,	Columbus Medical College
Pontius, L W	Canton,	Rush Medical College
Stoll, J H	Ashland,	Jefferson Medical College
Bye, J M	Waynesburg,	University of Michigan
Pease, A L	Massillon,	University of Wooster
Reed, G M	Massillon,	University of Pennsylvania

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Sisler, L E	Clinton,	Western Res. Medical College
Hart, H H	Wooster,	University of New York
Hague, H	Shreve,	University of Wooster

NORTH-WESTERN OHIO MEDICAL ASSOCIATION.

Archer, J D	Holgate,	Starling Medical College
Aris, Jas F	Toledo,	University of Michigan
Ashton, E	Lima	
Ash, W N	Toledo,	Toledo Medical College
Bain, F D	Kenton,	Bellevue Hosp. Med. Col.
Baxten, S A	Lima	
Baldwin, F J	Bluffton	
Berlin, C	Wapakoneta,	Ohio Medical College
Beaghler, A C	Middlepoint	
Benned, C T	Tiffin	
Beardsley, C E	Ottawa,	University of Michigan, Bellevue Hosp. Med. Col.
Begg, W H	Columbus Grove,	Med. Col. of Ohio
Bland, J	Bucyrus	
Bishop, S P	Delta,	Bellevue Hosp. Med. College
Bigelow, A	Toledo,	Vermont Medical College
Blachley, H W	Van Wert,	West. Reserve Med. Col.
Blizzard, J W	Ft. Recovery	
Bloomfield, John	Napoleon,	Medical College of Ohio,
Blaine, H G	Attica	Indiana Eclectic Med. Col. and Toledo Medical College
Bond, J W	Toledo,	University of New York
Bowen, Geo W	Toledo,	University of Michigan
Bodman, L H	Toledo,	Phys. & Surg., N. Y.
Bowen, A D	West Lodi,	Toledo Medical College
Bowers, I S	Perrysburgh,	Detroit Medical College
Brayton, W G	Arcadia,	Medical College of Ohio
Bradley, J	St. Marys,	Medical College of Ohio
Brewington, W J	St. Marys,	University of Michigan
Brown, W H	Lyons,	University of Michigan
Brundage, S P	Wapakoneta,	Medical College of Ohio
Brigham, O S	Toledo,	University of Michigan
Bricker, W R	Shelby,	Cleveland Medical College
Bricker, J W	Fostoria	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Brinkerhoff, D H	Fremont,	Cincinnati Col. Med. & Surg.
Brayton, A	Carey,	Medical College of Ohio Bellevue Hosp. Med. Col.
Belt, W A	Kenton,	Medical College of Ohio
Brayton, F W	Carey,	Miami Medical College
Brooks, P H	Lima,	Miami Medical College
Burrit, W H	South Toledo,	
Burton, E G	Westminster,	Ohio Medical College
Byal, W A	Findlay,	
Campbell, L W	Ada,	Rush Medical College
Caples, R C	Fostoria,	
Caldwell, Wm	Fremont,	Charity Hosp. Med. Col.
Campbell, J C	Spencerville,	Starling Medical College
Cessna, B F	Kenton,	University of Michigan Jefferson Medical College
Christopher, W H.	Van Wert,	Starling Medical College
Cherry, Wm	Toledo,	McGill, Edinburgh
Chapman, W C	Toledo,	Miami Medical College
Chamberlin, D P.	Toledo,	Western Reserve, Cleveland
Chesney, W M	Kenton,	Starling Medical College
Chesney, Jno A	Bucyrus,	
Chilcotte, C H	Bairdstown,	
Chesney, J M	Marsailles,	
Cleppinger, J S.	West Cairo,	
Clark, J R	Bluffton,	
Coldham, Jas	Toledo,	Med. Dep. Harvard University
Collamore, Geo A.	Toledo,	Med. Dep. Harvard University
Cosgrove, Thomas.	Sylvania,	Detroit Medical College
Cole, W C	Mendorn,	University City, New York
Crooks, R L.	Convoy,	Ft. Wayne Col. of Med.
Curry, Jno H	Toledo,	Miami Medical College
Cullison, W W.	Toledo,	Charity Hosp. Med. College
Curtis, E	Lima,	Herkimer Medical College
Curtis, C L	Lima,	Col. of Med. & Surg.
Carey, M J	Woodville,	Columbus Medical College
Clevenger, R E	N. Washington,	Miami Medical College
Davis. John	Gomer,	University of Michigan
Day, Hiram	Pendleton,	
Day, H M	Pandora,	Cleveland Medical College
Depuy, W W	Van Wert,	Ft. Wayne Medical College
Demer, H E	Vickery,	Columbus Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Devilbis, Allen	Toledo,	Miami Medical College
Dimoke, Eli	Dupont	
Dickey, W A	Bloomdale,	Louisville Medical College Chicago Medical College
Donaway, J C	Deshler,	West. Res. Med. College
Duncan, J A	Toledo,	Bellevue Hosp. Med. Col. University of Michigan
Duncan, A M	Bucyrus,	Bellevue Hosp. Med. Col.
Durbin, R M	Hessville,	Med. Dep't Uni. of Wooster
Eakin, T E	Columbus Grove,	West. Res. Med. Col.
Ellis, R A.	Findlay.	
Estill, J A.	Shanes Crossing.	
Evans, C A	Delphos,	Medical College of Ohio
Evans, J B	Ada,	Ft. Wayne Medical College
Ewing, Frank	West Cairo,	University of Michigan
Firmin, F W	Findlay,	Cleveland Medical College
Fisher, A W.	Toledo,	Jefferson Medical College
Forbes, S F	Toledo,	University of New York
Foster, John	Mt. Blanchard.	
Foster, Thomas	Carey,	Willoughby University
Foltz, T H	Lima,	University of Wooster
Fountain, James	Lima.	
Gardner, John	Toledo,	Starling Medical College
George, E	Van Buren,	Indiana Medical College
Gehrett, T M	Deshler,	Toledo Medical College
Gibbon, H B	Tiffin,	Kansas City Col. Med. & Surg.
Ginn, A P.	Fremont	
Glenn, G C	Van Wert	
Godfrey, C M	Ottawa	
Goebel, Annie M	Lima,	University of Michigan
Groat, Frank.	Fremont,	Woman's Med. Col. of Chicago
Haukins, Timothy.	Van Wert,	Cin. Col. of Med. and Surg.
Hartman, Geo. W.	Archbald	
Hatterey, J E	Elgin,	Starling Medical College
Hathaway, H	East Toledo,	Miami Medical College
Havighorst, H S	Toledo	
Haines, J B.	Mendon,	Ft. Wayne Col. of Medicine
Hamilton, H A	Perrysburgh,	University of N. Y.
Haley, J S	Napoleon,	Jefferson Medical College
Harrison, E B	Napoleon,	Jefferson Medical College
Haag, D E	Liberty Centre,	Cin. Col. of Med. & Surg.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Hale, R W. . . .	Fostoria,	National Med. Col., Washington
Harper, W H. . .	Lima, ...	Starling Medical College
Heistand, E B. . .	Kenton, . . .	Starling Medical College
Hedrick, J S. . . .	North Washington,	Starling Med. Col.
Henry, A G. . . .	North Baltimore	
Heller, J	Grand Rapids,	University of Michigan
Hines, S B	Lima, ...	Ohio Medical College
Hill, R M C. . . .	Toledo, ...	Toledo Medical College
Herman, S S. . .	Lima, . . .	Med. Dep't of Uni., Buffalo
Higgins, C W . .	Toledo, ...	Bellevue Hospital Western Reserve
Hickey, W H . .	Leipsic,	Med. Dep't W. Reserve Uni.
Hixson, M M . .	Dupont	
Hoege, Geo. L . .	Fostoria, . .	Charity Hosp. Med. Col.
Hoy, B F.	Belmore.	
Hurd, A	Findlay.	
Hutchinson, J H S	. . . . .	
Huber, H.	Glanderf.	
Imhoff, C E . .	Belmore.	
Jenner, C W . . .	Crestline, . .	Charity Hosp. Med. Col. Cleveland Medical College
Jenner, A B. . . .	Jenneria,	Cin. Col. of Med. and Surg.
Jewell, N W. . .	Wauseon,	Cin. Col. of Med. and Surg.
Jones, W W. . .	Toledo, ...	University of Buffalo
Jones, R E . . .	Gomer, ...	Miami Medical College
Jones, W A. . . .	Antwerp.	
Jones, C P. . . .	Nevada.	
Jangbluth, Max .	Toledo, ...	Wurtzburg
Kahle, A W. . .	Lima,	Col. Phys. and Surg., Baltimore
Kahle, R D . . .	Lima,	University of City of New York
Keller, Thomas F.	New Washington,	Rush Med. College
Kishlen, W G . .	St. Mary's.	
Kirkley, C A . .	Toledo, . . .	Starling Medical College
Kitchen, F A . .	Toledo, . .	University of Pennsylvania
Kinmont, T C . .	Hicksville, . .	University of Michigan
Krebs, R W J . .	Westminster,	Med. Dep't of Penn. Col.
Krout, A N. . . .	Van Wert, . .	Starling Medical College
Lafferty, A B . .	Arlington.	
Ladd, L E. . . .	Middlepoint,	Col. of P. & S., Baltimore
Lawless, J T. . .	Toledo, ...	University of Michigan
Lathrop, A B . .	Swanton.	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Lauder, W L	North Baltimore	
Levan, D H	Mt. Victory	Jefferson Medical College
Leonard, B B	West Liberty	
Lenhart, P J	Wauseon	Med. Dep't. Wooster Uni.
Leonard, B L	West Liberty	
Linninger, A J	Mendon	
Liners, T J	Tiffin	Wooster University
Lipes, U G	Toledo	Ft. Wayne Medical College
Longsworth, W N.	Van Wert	
Longfellow, A J	Fostoria	
Long, J W	Bryan	
Lynch, Wm.	Shane's Crossing	
Manville, A J	Bowling Green	Bellevue Hos. Med. Col.
Marten, E T.	Liberty Centre	University of Mich.
McClarin, Avery	North Baltimore	Med. Dep. Uni. Wooster
McCullom, E J	Tiffin	Jefferson Medical College
McConnell, D W.	Marsailles	
McClung, Jno. C.	Leipsic	
McClure, T R	Hedges	
McHenry, Wm.	Lima	Practitioner
McKellar, A R	Green Springs	Phys. and Surg., N. Y.
McKinley, E B.	Vaughnsville	Starling Medical College
McGavern, G W.	Van Wert	
McLeod, J R	Benton	
McLaughlin, C C.	Dunkirk	Starling Medical College
McMillen, Alex	Genoa	
Miller, W L.	Findlay	Jefferson Medical College
Mills, C H	Toledo	Toledo Medical College
Miley, L E	Wauseon	Med. Dep't Uni. of Mich.
Morris, Joseph.	Columbus Grove	University of Mich.
Montgomery, H B.	Gilboa	
Munson, A W.	Kenton	Med. Dep't W. Res. College
Murbach, A J	Archbold	Starling Medical College
Munn, H E	Colton	Toledo Medical College
Myers, A H.	Carey	Cleveland Medical College
Neville, J W.	Round Head	
Newman, J E	Gilboa	Savannah Medical College
Nichols, J H	Wapakonata	Medical College of Ohio
Nolen, J G	Toledo	Toledo Medical College
Norris, M M	Fostoria	
Nuding, W H	New Bremen	

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Paul, W H	Adrian	
Parrott, D F	Mendon	
Paul, T E	Ottawa,	Geneva Medical College, N.Y.
Pennington, G W	Weston,	Kentucky School of Medicine
Philips, W H	Kenton,	Rush Medical College
Phelps, C H	St. Mary's,	Medical College of Ohio
Pollock, S J	New Hampshire,	Cleveland Med. Coll.
Priest, Jonathan	Toledo	
Pontius, C R	Fremont	
Reed C H	Toledo,	Starling Medical College
Reed, W F	Ottawa,	University of Michigan
Reed, E J	Leipsic,	Cin'ti Coll. of Med. & Surgery
Reid, J L	VanWert,	Medical College of Ohio
Reid, Chas. B	VanWert,	Ft. Wayne Medical College
Reinhart, J C	Toledo,	Jeff. Med. Col. & N. W. Ohio M. C.
Reiff, Chas. T	Fremont	
Rheinfrank, J H	Perrysburgh.	University of Michigan
Richardson, D H	Celina,	St'l'g Med. Col. & Med. Col. of O.
Richardson, J V	Ft. Recovery,	Ohio Medical College
Rice, John B	Fremont,	University of Michigan
Rice, Robert H	Fremont,	University of Michigan
Richey, John A	Osceola	
Root, H A	Toledo,	Charity Hosp., Cleveland
Rogers, J A	Kenton,	Ohio Medical College
Rush, D.	Celina	
Rudy, A S	Herring,	Ohio Medical College
Sager, Joseph	Celina,	Starling Med. Col. & Maryl'd U'y
Sauer, P B	Napoleon,	Woman's Med. Col. of Phil'a
Sager, N Jr	Herring	
Schwan, F W	Poplar,	Rush Medical College
Schlink, F H	Delphos,	Miami Medical College
Sexaner, C F	North Robinson,	Med. Dep. W. R. U'y
Shaffuer, J F	Willshire,	Ohio Medical College
Schnetzler, H M	Toledo,	Starling Medical College
Shoemaker, J M	Napoleon,	University of Michigan
Skinner, S W	Toledo,	Medical Department Yale Coll.
Sherrard, A C	Oakwood	
Slayer, J L	Paulding,	Columbus Medical College
Smith, William	Van Wert	
Small, W W	Middlepoint	
Smith, W M	Van Wert,	Columbus Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Smith, C N	Toledo,	Bellevue Hosp. Medical College
Smith, C H	Kenton,	Starling Medical College
Smith, D C	Dunkirk.	
Smith, Gould,	Kenton.	
Snodgras, Jesse	Kenton,	Bellevue Hosp. Medical College
Souder, R L	Nevada,	Detroit Medical College
Speece, N V	Quincy.	
Squier, J B	Sulphur Springs,	Eclectic Med. Inst., Cin.
Stutsman, J M	Van Wert.	
Stansell, J A	Forest,	Miami Medical College
Stewart, J M	Oak Harbor,	Bellevue Hosp. Med. Col.
Stamm, M.	Fremont.	Univ. of Berne, Switzerland
Steiner, D W	Lima,	University of Michigan
Stevens, M B	Defiance,	Bellv. Hos. Med. Col. & U. Mich.
Stewart, W D	Pemberville,	Wooster University
Stemen, H G	Delphos,	Ft. Wayne College of Med.
Swimeley, W A	Kenton,	Cincinnati Medical College
Thorn, S S	Toledo,	University of New York
Thompson, F B	Ada.	
Thompson, C M	Holgate.	
Thompson, John C.	Rollersville.	
Thomas, O H	Fremont,	Ohio Medical College
Thacker, L G	Defiance,	Bellevue Hosp. Med. Col.
Thrift, John T	Columbus Grove.	
Thrift, R W	Lima,	Medical College of Ohio
Tonvelle, S N	Celina.	
Townsend, J.	Holegate.	
Tobey, H A	Toledo,	Miami Medical College
Tracey, J L		Bellevue Hospital Med. Col. Cincinnati Col. Med. & Surg.
Tuller, W M	Bowling Greene,	Cin. Col. Med. & Surg.
Tupper, C E	Ottawa,	Cleveland Medical College
Tupper, C G	Ottawa,	Columbus Medical College
Vail, J B	Lima,	Ohio Medical College
Vanpelt, C L	Toledo,	University of Buffalo
Waddick, J M	Toledo.	
Walters, J W	Ada.	
Watters, R L	Lindsay.	
Walker, R J.	Bucyrus.	
Wagoner, H P	Delphos,	Bellevue Hosp. Med. Col.
West, T J	Tiffin,	Charity Hosp. Med. College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
West, M A. . .	Mexico.	
Wetherell, I R .	Beaver Dam, . .	Col. of Phys. & Surg.
Wendock, T M .	Lima, ...	University of Michigan
Wilson, W P. . .	Van Lue, . .	Starling Medical College
Williamson, M S.	Arcadia.	
Wilkinson, E L .	Van Wert, . .	Starling Medical College
Williams, A S . .	Fostoria.	
Willett, P	Elmore, . .	Cleveland Medical College
Woods, Thos E .	Rawson.	
Williams, F S . .	Kalida.	
Wood, W F. . .	New Bremen.	
Woods, J K . . .	Van Wert, .	Cin. Col. of Med. & Surg.
Woods, J T . .	Toledo, ...	University of Michigan
Woodward, Geo .	Oak Harbor, .	Medical College of Ohio
Yoder, S S . . .	Lima.	
Yost, W N . . .	Mt. Blanchard, .	Miami Medical College
Young, P B . . .	Crestline.	
Yingling, G S . .	Tiffin, ...	University of Maryland
Zulch, Gustave . .	New Knoxville.	
Zigler, H H . . .	Ayresville, . .	University of Michigan

Pickaway County Medical Society.

Blaker, C E . . .	South Bloomfield, .	Ohio Medical College
Blackstone, Thos .	Circleville, . .	Bellevue Medical College
Boggs, S E . . .	Darbyville.	
Bowers, E D. . .	Circleville, . .	Jefferson Medical College
Hammel, M. . .	Circleville, . . .	Ohio Medical College
Helmick, S C . .	Commercial Point.	
Jones, N E . . .	Circleville, . .	Western Res., Cleveland
Jones, H E . . .	Circleville, . . .	Ohio Medical College
Kirkendoll, J T .	Darbyville.	
May, John B . . .	New Holland,	Cin. Col. of Med. & Surg.
Row, Geo. T . .	Circleville, . .	University of Maryland
Shaeffer, A H . .	Circleville, . .	Starling Medical College
Stewart, Charles .	Ashville, ...	Ohio Medical College
Squires, D H . .	Ashville, . .	Columbus Medical College
Tipton, T C . . .	Williamsport, .	Starling Medical College
Thompson, J C .	South Bloomfield, . .	Berkshire, Mass.
Thompson, A W .	Circleville, . . .	Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Warner, Wm	Circleville,	Columbus Medical College
Wilder, G A	Circleville,	Berkshire Med. Col., Mass.

Piqua Society of Clinical Medicine.

Alff, Louis	230 S Wayne,	Berlin
Ashton, A S.	502 N Main,	Jefferson Medical College
Gabriel, J F.	418 N Wayne,	Starling Medical College
Gray, S S.	223 W Ash,	Starling Medical College
Hyde, Geo. S	108 W Ash,	University of Maryland
O'Ferrall, R M.	516 N Wayne,	Ohio Medical College
Parker, W S.	613 N Wayne,	Jefferson Medical College
Shellenberger, J E.	426 N Wayne,	Jefferson Medical College
Smith, S D	312 W Water,	University of Penn.

Preble County Medical Society.

Brown, W G.	Lewisburg,	Ohio Medical College
Campbell, W A	Eaton,	Ohio Medical College
Canny, W W	Camden,	Miami Medical College
Conarroe, A W G.	West Elkton,	Miami Medical College
Davisson, J A.	Eldorado,	Ohio Medical College
Gans, P T.	West Florence,	Cincinnati Med. Col.
Gray, F C.	Lewisburg,	Miami Medical College
Horn, J E.	West Manchester,	Bellevue Hosp., N. Y.
Haynie, J D.	Washington C. H.,	Ohio Medical College
Hawley, A C	Ebenezer,	Ohio Medical College
Jones, Chas	Camden,	Ohio Medical College
Michael, Frank	Eaton,	Bellevue Hosp. Med. Col., N. Y.
Riley, W H.	West Alexandria,	Miami Med. Col.
Shurtz, C D	Coal City, Ill.,	Rush Medical College
Welsh, J B	Eaton,	Ohio Medical College
Williamson, M E.	New Paris,	Miami Medical College

Ross County Medical Society.

Barnes, T S	Chillicothe,	Bellevue Hosp. Med. Col.
Cox, J M.	South Salem,	Starling Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Caldwell, J L	Waverly,	Cincinnati College of Med.
McDougal, C S.	Athens,	Ohio Medical College Jefferson Medical College
Evans, T W.	Richmonddale.	
Evans, J M	Chillicothe.	
Franklin, G S	Chillicothe,	Col. Phys. and Surg., N. Y.
Freeman, Geo	Richmonddale,	Ohio Medical College
Galbraith, E J	Chillicothe,	Ohio Medical College
Galbraith, Rob't	Frankfort,	Ohio Medical College
Hall, R B.	Chillicothe,	Miami Medical College
Hall, W A	Chillicothe,	Miami Medical College
Hurst, W R.	Piketon.	
Hughey, B	Frankfort.	
Hughey, W F	Yellow Bud	
Leslie, J M	Chillicothe,	Ohio Medical College
Lash, J W	Chillicothe,	Columbus Medical College
Matthews, J M	Frankfort,	Cincinnati Col. M. and S.
Morgan, J B F.	Clarksburgh,	Ohio Medical College
Pricer, W E.	South Salem.	
Robb, W H.	Frankfort,	Ohio Medical College
Scott, D H	Chillicothe,	Cleveland Medical College
Sunbeck, F L	Chillicothe,	Col. P. and S., Chicago

Sandusky County Medical Society.

Bowman, D E	Kansas Station,	University of Michigan
Brinkerhoff, D H.	Fremont,	Cincinnati Col. Med. & Surg.
Caldwell, Wm	Fremont,	Charity Hosp. Med. Col.
Campbell, D P	Green Spring,	Cin. Col. of Med. & Surg.
Corey, J M	Fremont,	Bellevue Col. of Med. & Surg.
Durbin, R M.	Hessville,	Med. Dep't Uni. of Wooster
Ervin, N B	Gibsonburgh,	Wooster University
Gessner, L S J	Fremont,	Uni. of Heidelburgh, Baden
Harnden, C L	Clyde,	University of Wooster
Marshall, Jno S	Green Spring,	Miami Medical College
Pontius, C B.	Fremont,	Starling Medical College
Rice, J B	Fremont,	University of Michigan
Rice, R H	Fremont,	University of Michigan
Robinson, L E.	Clyde,	Rush Medical College
Smith, Geo E	Fremont,	Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Stamm, M	Fremont,	University of Berne
Stillwell, Thomas	Fremont,	Jefferson Medical College
Taylor, S B	Fremont,	Starling Medical College
Thomas, O H	Fremont,	Ohio Medical College
Wilson, Jas W	Fremont,	Jefferson Medical College
Lanterman, Geo	Bellevue.	
Rawson, L O	Fremont.	
Shepley, A D	Helena.	
Thoneson, J C	Rollersville.	
Ohlinger, J	Lindsey.	
Gillette, W I	Bettsville.	
Waters, R.	Lindsey.	
Woodruff, S	Clyde.	

Seneca County Medical Society.

Bricker, S W	Tiffin,	Eclectic Medical Institute
Bricker, J N	Fostoria,	Eclectic Medical Institute
Bricker, H	Tiffin,	Cincinnati Medical College
Benner, C T	Tiffin,	Western Reserve, Cleveland
Campbell, A M	Tiffin,	Western Reserve, Cleveland
Dickey, W A	Tiffin,	Chicago Medical College
Fanning, J F E	Tiffin,	Miami Medical College
Gibbon, H B	Tiffin,	Kansas City Col. of Med. & Surg.
Heckerman, J U	Tiffin,	National Medical College
Hoy, J W	Bloomville,	University of Pennsylvania
Hoage, Geo L	Fostoria,	Med. Dep't Wooster Uni.
Hale, R W	Fostoria,	National Medical College
Hershiser, H K	Tiffin,	Columbus Medical College
Kinnaman, J P	Tiffin,	Cleveland Medical College
Keller, Thos F.	New Washington,	Rush Medical College
Keppel, J W	Old Fort,	West. Reserve, Cleveland
Leahy, M	Tiffin,	Med. Dep't Uni. of Wooster
Livers, T J	Tiffin,	Med. Dep't Uni. of Wooster
McCollum, E J	Tiffin,	Jefferson Medical College
McKeller, A R	Green Spring,	Col. Phys. & Surg., N.Y
Martin, A M	Bloomfield,	Cin. Col. of Med. & Surg.
Norton, James A.	Tiffin,	Keokuk, Ia.
Noble, H H	Tiffin,	Western Reserve, Cleveland
Spooner, H K	Republic,	Western Reserve, Cleveland

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Schwan, F W	Poplar P. O.,	Rush Medical College
Sampson, G N.	McCutchensville,	Ohio Medical College
Steele, R G	Melmore,	West. Res. Med. College
Williard, G P	Tiffin,	Jefferson Medical College
West, T J.	Tiffin,	Charity Hosp. Med. College
Wert, W O	Poplar P. O	Columbus Medical College
Williams, L G	Fostoria,	Med. Dep't Uni. of Wooster
Wenner, H L	Tiffin,	Western Reserve, Cleveland
Yingling, G S	Tiffin.	University of Maryland
Foecht, W H	New Riegel,	Phys. & Surg., Baltimore
Knight, T	Attica,	Miami Medical College

Shelby County Medical Society.

Carter, J M	Jackson Center,	Ohio Medical College
Conklin, H S	Sidney,	Ohio Medical College
Costolo, J W.	Berlin,	Ohio Medical College
Crumbaugh, S S	Port Jefferson,	Ohio Medical College
Collins, S M	Sidney,	Cincinnati Medical College
Geyer, J D	Sidney,	Med. Col. of Indiana
Grosvenor, A W	Hardin,	Ohio Medical College
Hamshire, J F	Plattsville,	Ohio Medical College
Hunt, H	Careysville,	Ohio Medical College
Harbour, C W B.	Anna.	Miami Medical College
Beeman, P	Sidney,	Washington Medical College
Drischoll, P B	Youngstown,	Columbus Medical College
Johnston, C E	Sidney,	Starling Medical College
Keve, W R	Sidney,	Ohio Medical College
Miller, John F	Port Jefferson,	Practitioner
Millholland, Wm.	Pemberton,	Miami Medical College
Norman, L M	Sidney,	Ohio Medical College
Silver, D R	Sidney,	Jefferson Medical College
Steely, E A	Anna,	Ohio Medical College
Steely, H S.	Anna,	Ohio Medical College
Speece, N V	Quincy,	Starling Medical College
Smith S D	Piqua,	University of Pennsylvania
Sharp, B M	Sidney,	Columbus Medical College
Turner, Wm	Kettersville,	Starling Medical College
Woods, W F	Sidney,	Cin. Col. of Med. & Surg. Columbus Med. College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Toby, H A . . .	Toledo, ...	Miami Medical College
Tate, G M	Bodkins, .	Cincinnati Medical College

Stark County Medical Society.

Baker, W O . . .	Louisville,	Charity Hos. Med. Col., Clev'd
Barnes, S S P . .	Massillon, . .	Jefferson Medical College
Brant, A C . . .	Canton,	Bellevue Hospital Med. College
Bye, J M	Waynesburgh.	Med. Dep. Univ., Mich.
Campbell, A B . .	Canal Fulton,	Med. Dep. Univ., Mich.
Cock, George B .	Canton.	
Conklin, S A . .	Canton,	Western Reserve Med. College
Daugherty, J E .	Canton.	
Daugherty, L E .	Greentown,	Columbus Medical College
Evans, C H . . .	Canton, . . .	Jefferson Medical College
Foulks, M C . .	Canton,	Med. Dep't Wooster University
Fraunfelter, Jas. .	Canton, . . .	Jefferson Medical College
Gans, A H . . .	Navarre.	
Gans, D L	Pierce.	
Hudson, J F . .	Canton,	Med. Dep. Wooster University
Jessup, Dr. . . .	Maximo.	
Laudor, T J . . .	Canton,	Med. Dep. McGill Un., Montreal
Leininger, A . .	Canton,	Med. Dep. Wooster University
McCort, J W . .	Waynesburgh.	
McIlravy, L . . .	Magnolia,	Univ. Medical College, N.Y.
Maxwell, D P . .	Canton, . . .	Jefferson Medical College
Miller, T Clark .	Massillon.	
Morrow, E P . .	Canton, ...	Miami Medical College
Phillips, T H . .	Canton, . . .	Jefferson Medical College
Pease, A P L . .	Canton,	Med. Dep. Wooster University
Pontius, Lorin W.	Canton, ...	Rush Medical College
Pontius, Maria S .	Canton, . .	Columbus Medical College
Portman, E O . .	Canton,	Med. Dep. Wooster University
Post, S B		Jefferson Medical College
Reed, N H . . .	Massillon, . .	Jefferson Medical College
Ridenour, A W .	Massillon, . . .	Ohio Medical College
Radel, L W . . .	Canton,	Med. Dep. Wooster University
Santee, L B . . .	Marlboro,	Med. Dep. U'y Pennsylvania
Schilling, J P . .	Louisville, . .	Starling Medical College
Shetler, S J . . .	Navarre,	Med. Dep. Wooster University

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Smith, A V	Canton,	Rush Medical College
Steel, W C	New Berlin,	Med. Dep. Wooster Univ.
Tressel, J H	Alliance.	
Walker, A B	Canton,	Jefferson Medical College
Yohe, B T	Middlebranch.	

Stillwater Medical Society.

Anderson, B G	Milnersville,	Starling Medical College
Black, H C	Freeport,	Not a Graduate
Brannan, T H	Canal Dover,	L. I. Hosp. Med. Col.
Brown, O S	Londonderry,	Starling Medical College
Custer, G D	Tippecanoe,	Columbus Medical College
Groves, J E	Uhrichsville,	Columbus Medical College
Hobson, J A	Flushing,	Miami Medical College
Howell, J G	Freeport,	Miami Medical College
Johnson, J D	Cadwallader,	Not a Graduate
McCurdy, S L	Dennison,	Columbus Medical College
Parks, T C.	New Philadelphia,	Starling Med. Col.
Price, C H	Milnersville,	Med. Col. of Ohio
Pumphrey, R J	Freeport,	Cin. Col. of Phys. & Surg.
Pyle, Sherman.	Mineral Point,	Bellevue Hosp. Med. Col.
Rosemond, W B.	Milnersville,	Ohio Medical College
Shiry, J L.	Akron,	Starling Medical College
Webster, J V	Flushing,	Cin. Col. Phys. and Surg.
Welsh, J M	Deersville,	Cin. Col. Phys. and Surg.
Wallace, John	Cadwallader,	Not a Graduate

Summit Co. Medical and Surgical Society.

Brashear, B B	Akron,	Col. of Phys. and Surg., N. Y.
Conn, Eli	Akron,	Charity Hosp. Med. Col.
Davison, C C	Akron,	Columbus Medical College
Ebright, L S.	Akron,	Charity Hosp. Med. Col.
Fisher, H M	Akron,	Jefferson Medical College
Foltz, A E	Akron,	Charity Hosp. Med. Col.
Fouser, A K.	Akron,	Medical College of Ohio
Hoover, Albert.	Akron,	Jefferson Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Howard, E W	Akron,	Berkshire Medical College
Hitchcock, E	Akron,	West. Reserve Medical College
Hough, W S.	Cayahoga Falls,	Med. Dep. U. Wooster
Lee, J L	Akron,	Med. Dep. Uni. of Wooster
Millikin, C W	Akron,	University of Pennsylvania
McEbright, Thos.	Akron,	Starling Medical College
Russell, F P.	Suffield,	Med. Dep't Uni, of Wooster
Scott, Daniel A	Akron,	Med. Dep't Uni. of Wooster
Slabaugh, W H	Mogadore,	Bellevue Medical College
Taggart, H D	Akron,	Jefferson Medical College
Underwood, W J	Akron,	Jefferson Medical College
Wright, S J	Tallmadge,	Cleveland Medical College
Bauer, F J.	Mogadore,	Med. Dep. Uni. of Wooster

Toledo Medical Association.

Aris, Jas F	Toledo,	Med. Dep't Uni. of Michigan
Beckwith, S W	East Toledo,	N. West Ohio Med. Coll.
Bessey, J M	Toledo,	Howard University
Bigelow, Asa	Toledo,	Vermont Medical College
Bodman, L H	Toledo,	Col. Phys. & Surg. N. Y.
Bond, J W	Toledo,	University, City of New York
Bowen, Geo W	Toledo,	University of Michigan
Brigham, O S	Toledo,	University of Michigan
Chase, J L	Toledo.	
Collamore, G A	Toledo,	Howard University Med. Col.
Chamberlin, D P.	Toledo,	Western Reserve, Cleveland
Cherry, Wm	Toledo,	McGill College, Edinburgh.
Cosgrove, Thos	Sylvania,	Detroit Medical College
Cullison, W W.	Toledo,	Charity Hosp. Med. Col.
Chapman, Wm C.	Toledo,	Miami Medical College
Curry, John H.	Toledo,	Medical College of Ohio
Coldham, Jas	Toledo,	Howard University Med. Col.
Darst, H H	Toledo,	Starling Medical College
Duncan, J A.	Toledo,	Bellevue Hosp. Med. Col. University of Michigan
Downs, Sam	Waterville,	Miami Medical College
DeVilbis, Albert.	Toledo,	Miami Medical College
Donnelly, Jas	Toledo,	N. W. Ohio Med. College
Emery, C S	Toledo,	N. W. Ohio Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Forbes. Sam'l F	Toledo,	University, City of N.Y.
Fisher, A W	Toledo,	Jefferson Medical College
Gifford, W R	Toledo,	University of Michigan
Gardner, John	Toledo,	Starling Medical College
Hathaway, H	Toledo,	Miami Medical College
Higgins, C W	Toledo,	West. Res. Med. College Bellevue Hosp. Med. Col.
Hendrich, L W	Toledo,	West. Res. Med. College
Jones, W W	Toledo,	University of Buffalo
Jungbluth, M C	Toledo,	Wurzburg, Germany
Kirkley, C A	Toledo.	Starling Medical College
Kitchen, F A	Toledo,	University of Pennsylvania
Lawless, J T	Toledo,	University of Michigan
Lilly, J W.	Toledo,	Starling Medical College
Lipes, N G	Toledo,	Ft. Wayne Medical College
Moler, J G	Toledo,	Toledo Medical College
May, E G	Toledo,	N. W. Ohio Med. College
Reinhart, J C	Toledo,	Jefferson Medical College
Root, H A	Toledo,	Charity Hosp. Med. Col.
Reed, C H	Toledo,	Starling Medical College
Roulet, Chas.	Toledo,	N. W. Ohio Medical College
Schnetzler, H M	Toledo,	Starling Medical College
Skinner, S W	Toledo,	Yale Col., New Haven, Ct.
Smart, A R	Toledo,	Long Island Medical College
Smith, C N	Toledo,	Bellevue Hosp. Med. Coll.
Thorn, Geo L	Toledo,	N. W. Ohio Medical College
Thorn, Sam'l S	Toledo,	University City, N. Y.
Tracy, J L.	Toledo,	Cin. Col. of Med. & Surg. Bellevue Hosp. Med. Col.
Tindall, O N.	Toledo,	University of Michigan
Tobey, J A	Toledo.	
Waite, Albert S	Toledo,	N. W. Ohio Medical College
Woods, J T	Toledo,	University of Michigan
Wright, J A	Toledo,	Miami Medical College
VanPelt, C L	Toledo,	Med. Dep't Uni. of Buffalo
Becker, B	Toledo,	Zurich, Switzerland

Trumbull County Medical Society.

Bates, James,	Warren,	Med. Dep. West. Res. Univ.
Booth, C C	North Jackson,	Med. Dep. W. R. Univ.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Brown, W S . . .	East Mecca, .	Med. Dep. W. R. Univ.
Button, W H . .	Burg Hill, . .	Med. Dep. W. R. Univ.
Caspar, F	Niles.	
Cory, F C	Bristolville,	Med. Dep. W. Res. Univ.
Dalrymple, N A .	Warren,	Med. Dep. Wooster Uinversity
Griswold, Elisha .	Sharon, Pa.,	Jefferson Medical College
Haine, W J . . .	West Farmington,	Col. P. & S., N. Y.
Harmon, Julian .	Warren,	Med. Dep. West. Res. Univ.
Hayes, R P . . .	Vienna, . . .	University of Pennsylvania
Hunt, W C . . .	Warren,	Med. Dep. West. Res. Univ.
Hurd, L C . . .	Orangeville,	Med. Dep. W. Res, Univ.
Iddings, Warren .		Med. Dep. Western Reserve University
Jones, Allan . . .	Kinsman,	Med. Dep. West. Res. Univ.
Jones, Mrs. Carrie.	Kinsman, .	Med. Dep. Wooster Univ.
King, John I . . .	Burg Hill, .	Bellevue Hosp. Med. Coll.
Leitch, A J . . .	Niles, . .	Med. Dep. West. Res. Univ.
Metcalf, C T . . .	New York, N. Y.,	Geneva Med. Coll.
Moore, L C . . .	Kinsman,	LongIsland Hosp. Med. Coll.
Miner, A G . . .	Niles, ...	Jefferson Medical College
Moore, E . . .	Southington.	
McMurray, James.	Hubbard, . . .	Ohio Medical College
Rupp, S M . . .	Warren,	Med. Dep. West. Res. Univ.
Rice, C M	Newton Falls,	Med. Dep. W. R. Univ.
Smith, S H . .	Warren,	Med. Dep. Univ. of Michigan
Stewart, J E . . .	Brookfield,	one course, Willoughby U'y
Stewart, T H . .	Church Hill,	Med. Dep. Univ. of Mich.
Stevenson, G R .	Hubbard, . . .	Rush Medical College
Thompson, A W.	Bristolville,	Med. Dep. West. Res. Univ.
Williams, M L . .	Vienna,	Med. Dep. Univ. of Michigan
Williams, T B . .	Cleveland,	Med. Dep. West. Res. Univ
Ward, C S . . .	Warren,	Med. Dep. Univ. of Michigan
Woods, D B . . .	Warren.	

Union Medical Society of the Counties of Columbiana, Mahoning, Portage, Stark and Carroll.

Anderson, James.	Salem,	Med. Dep. University of N. Y.
Brook, G W . . .	Ellsworth, .	Cleveland Medical College
Bossert, J	Washingtonville,	Cleveland Med. Coll.
Calvin, James . .	Washingtonville,	Wooster Medical Col.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Douglass, J A	Columbiana,	Miami Medical College
Fawcett, C L	Salem,	Jefferson Medical College
Gilmore, W A	West Point,	Med. Dep. West. Res. Col.
Grisselle, E	Salem,	Cleveland Medical College
Hoover, C M	North Benton,	Cleveland Medical College
Hughs, W K	Berlin Center,	Cleveland Medical College
King, A L	Columbiana,	Cin'ti Col. of Med. & Surg.
Moore, William	New Lisbon,	Miami Medical College
Moore, F P	New Lisbon,	Med. Dep. Univ. of Mich.
Marquis, T B	New Lisbon,	Bellevue Hosp. Med. Col.
Orr, Charles	Salem,	Bellevue Hosp. Medical College
Sturgeon, Eli	Salem,	Jefferson Medical College
Sturgeon, Jesse	Leetonia,	Bellevue Hosp. Med. College
Weisner, A H	Berlin Center,	Cleveland Med. College
Yates, J J	Hanoverton,	Never graduated
Yengling, A C	Salem,	Med. Dep. University of Mich.

Washington County Medical Society.

Blunden, M G	Lowell,	Medical College of Ohio
Bohl, John, Sr	Watertown,	Cin. Col. Med. and Surg.
Buchanan, J M.	Barlow,	Miami Medical College
Cooke, E T	Barlow,	Medical College of Ohio
Cotton, J D	Marietta,	Med. Dep. Uni. Louisville
Flemming, Ellis	Lawrence,	Coll. Phys. and Surg.
Funk, H H	Beverly,	Bellevue Hosp. Med. College
Gale, C P	Newport,	Col. Phys. and Surg., Balt're
Gale, G T	Newport,	Jefferson Medical College
Hardy, M V	Lower Salem,	Columbus Medical Coll.
Hardy, J M	Whipple,	Columbus Medical College
Hardy, J C	Lower Salem,	Columbus Medical Coll.
Hart, Samuel	Marietta,	Medical College of Ohio Bellevue Hosp. Med. Col.
Hart, R B., Jr.	Harmar,	Medical College of Ohio
Hill, E W	Cow Run,	Starling Medical College
Kelly, P H	Waterford,	Medical College of Ohio
McKim, F E.	Marietta,	Medical College of Ohio
McClure, James	Marietta,	Starling Medical College
Morrison, E B	Barlow,	Starling Medical College
Niswanger, M J	Macksburg,	Columbus Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Reed, G W	Belpre,	Miami Medical College
Reynolds, N M	Bartlett,	Col. Phys. & Surg., Keokuk
Skivington, John.	Marietta,	Medical College of Ohio
Sparling, F R	Gray,	Starling Medical College
Taylor, J R	Archers Fork,	Col. Phys. & Surg., Bal.
Templeton, B F	Centre Belpre,	Starling Medical Col.
Trickle, E H.	Cutler,	Miami Medical College
Warren, L E.	Marietta,	Columbus Medical College
Willis, O M	Marietta,	Columbus Medical College
Eddy, C W	Marietta,	Miami Medical College

Wayne County Medical Society.

Battles, Wm S	Shreve,	Starling Medical College
Barret, J E	Wooster,	University of Michigan
Firestone, L	Wooster.	
Liggett, George.	Wooster.	
Robison, J D	Wooster,	Jefferson Medical College
Taggart, W W	Wooster.	
Grill, Simon P	Orrville.	
Todd, J H.	Wooster,	Jefferson Medical College
Mateer, N H.	Wooster.	
Hart, Hugh A	Wooster.	
Hunt, Abram H	Wooster.	
Greenemier, P S	Smithville.	
Moncrief,	Orrville.	
Brinkerhoff,	Burbank.	

Wood County Medical Society.

Alford, J	Grand Rapids,	University of Michigan
Bowers, I S	Perrysburg,	Detroit Medical College
Heller, J L	Grand Rapids,	University of Michigan
Hughes, W E	Portage,	Buffalo University
Higgins, G	Bowling Green,	Ohio Medical College
Hamilton, H A	Perrysburg,	University of New York
Lincoln, J C	Bowling Green,	Rush Medical College
Manville, A J	Bowling Green,	Bellev. Hos. Med. Col.

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Pennington, G W.	Weston, . . .	Kentucky School of Med.
Rheinfrank, J H .	Perrysburg, . .	University of Michigan
Stewart, W D . .	Pemberville,	Med. Dep. Wooster Univ.
Spencer, Geo B .	Weston,	West. Reserve Medical College
Sullivan, O H . .	Bowling Green, ...	Indianapolis
St. John, C S . . .	Bowling Green,	Med. Dep Woos. Univ.
Tuller, W M . .	Bowling Green,	Cin. Col. of Med. & Surg.
Davis, B F . . .	Tontogany.	
Henry, A G . . .	N. Baltimore.	
Mead, J N . . .	Grand Rapids.	
Thomas, W F . .	N. Baltimore.	
Chilcott, C H . .	Bairdstown.	

Zanesville Medical Society.

Hildreth, Chas D.	Zanesville, . .	Medical College of Ohio
Culbertson, H . .	Zanesville, . .	Jefferson Medical College
Holden, W H . .	Zanesville, . .	Starling Medical College
Bell, A E	Zanesville, . .	Jefferson Medical College
Weller, G M . .	Zanesville, . .	Medical College of Ohio
Lenhart, W C . .	Zanesville, . .	Medical College of Ohio
Holston, J G F. .	Zanesville, . .	Jefferson Medical College
Davis, J T. . . .	Zanesville, . .	Medical College of Ohio
Jordan, J	Zanesville.	
Reamy, L M . .	Zanesville, . .	Medical College of Ohio
Logston, E C . .	Zanesville. . .	Starling Medical College
Evans, C H . . .	Zanesville, . .	Jefferson Medical College
Larzelere, J R . .	Zanesville, . .	Jefferson Medical College
Holden, J L . .	Zanesville, . .	Medical College of Ohio
Fassig, J M . . .	Zanesville, . .	Starling Medical College
Brush, E C . . .	Zanesville, . .	Starling Medical College
Peters, D C . . .	Zanesville, . .	Medical College of Ohio
Sutton, H T. . .	Zanesville, . .	Medical College of Ohio
Haldeman, J S . .	Zanesville, . .	Starling Medical College
Lenhart, C M . .	Zanesville, . .	Medical College of Ohio
Kennedy, J F . .	Zanesville.	
Cass, Edward . .	Dresden, . .	Jefferson Medical College
Geyer, J L . . .	Norwich, . .	Jefferson Medical College
Chambers, R E .	Chandlersville,.	
McCreary, H C .	New Concord,	Jefferson Medical College

NAMES OF MEMBERS.	POST-OFFICE ADDRESS.	WHERE GRADUATED.
Lane, J M. . . .	Sago.	
Axline, C Z . .	Fultonham, .	Medical College of Ohio
Green, J H . . .	Philo, ...	Starling Medical College
Walker, G W W.	Roseville, ...	Not a Graduate
Meelick, W A . .	Rosevile, . . .	Medical College of Ohio
Leeper, J F. . .	Rural Dale, .	Starling Medical College
Squires, A W . .	White Cottage,.	Columbus Med. College
McCreary, — . .	Rix Mills, . .	Medical College of Ohio
Dunn, C A . . .	Stovertown, ...	Not a Graduate
Jackson, A L . .	Adamsville,.	Columbus Medical College
LaRue, F. . . .	Chandlersville.	
McArthur, A D S.	Gratiot.	
Humphrey, J B .	Malta, .	University, City of New York
Kennedy, G L . .	Deavertown, .	Medical College of Ohio
Priest, S C . . .	Newark,.	Cin. Col. of Med. and Surg.
Speer, A T . . .	Newark, . . .	Medical College of Ohio
Gordon, P A . .	Junction City,.	Medical College of Ohio
Richards, A . . .	New Lexington.	
Oatley, A C . . .	Columbus.	
Ditts, M W . . .	Deavertown.	

CONSTITUTION AND BY-LAWS

OF THE

OHIO STATE MEDICAL SOCIETY,

ADOPTED AT COLUMBUS, O., JUNE 14, 1882.

ARTICLE I.

TITLE OF THE SOCIETY.

The name of this Association shall be "THE OHIO STATE MEDICAL SOCIETY."

ARTICLE II.

OBJECTS OF THE SOCIETY.

The objects of this Society shall be the advancement of medical knowledge; the elevation of professional character; the protection of the professional interests of its members; the extension of the bounds of medical science; and the promotion of all measures adapted to the relief of the suffering, the improvement of the health, and the protection of the lives of the community.

ARTICLE III.

MEMBERS OF THE SOCIETY.

SEC. 1. The Society shall consist of Delegates, Permanent Members and Honorary Members.

SEC. 2. Delegates shall receive their appointments from the county, or other local, Societies; *Provided*, however, that the officers of these Societies and the Chairmen of all committees who have reports to present, shall be Delegates *ex-officio*.

SEC. 3. Delegates from other State and foreign Societies, before admission to a seat in this Society, shall pro-

duce a certificate of delegation, signed by the President or Secretary of their Society.

SEC. 4. Delegates from Auxiliary Societies, before admission to a seat in this Society, shall produce a certificate of delegation, signed by the President or Secretary of their Society, and shall, after having complied with the requirements or provisions of Sec. 5, Art. III., become Permanent Members of the Society.

SEC. 5. Permanent Members shall be regular practitioners of medicine in the State of Ohio, shall be graduates of a medical college in good standing, shall be members of a county or district Society where they reside, and their election shall require a majority vote at a regular meeting, their eligibility having been previously reported upon favorably by the Committee on Admissions. Every applicant for permanent membership shall deposit with the Treasurer the sum of $3.00 as a membership fee, and also the dues for the current year (which sums shall be returned to him if his application is rejected). Permanent members alone shall transact the legislative business of the Society. Permanent members who may remove from this State shall, upon their request, be styled Non-resident Permanent Members, and shall, without payment of dues, be entitled to all the rights and privileges of Honorary Members.

Non-payment of dues for three years shall work a forfeiture of membership.

SEC. 6. The Society may elect eminent physicians as Honorary Members. Those elected in any year shall not exceed six.

SEC. 7. Honorary Members, and invited guests, shall have the privileges of a seat at the meetings, of presenting papers, and of taking part in the discussions, but they shall not vote on any question, nor be eligible to any office. Papers read by them require a special vote, by the Society, of reference to the Committee on Publication, in order to appear in the published Transactions.

SEC. 8. The names of all Permanent Members in good standing, and of all Honorary Members, shall be published annually in the Transactions.

ARTICLE IV.

AUXILIARY SOCIETIES.

SEC. 1. Any county, or other local, medical Society, whose constitution embraces the objects of this Constitution and the Code of Ethics of the American Medical Association, may, upon application, become auxiliary to this Society, and shall be entitled to one delegate for every five members, and one for every additional fraction of more than half that number.

SEC. 2. Every auxiliary Society shall enforce the observance by its members of the Code of Ethics adopted by this Society, and shall be authorized to censure, suspend, or expel any member convicted of violating its provisions.

SEC. 3. Any member of an auxiliary Society who shall feel aggrieved at the action of such Society in enforcing discipline among the members, shall have the right to appeal to this Society.

SEC. 4. The Secretary of each auxiliary Society, not less than one month preceding each annual meeting of this Society, shall make a full and correct catalogue, with post-office address, of its officers and members in good standing at that time, together with a certified list of its Delegates, and transmit the same at once to the Secretary of this Society. If the name of a member is omitted from this catalogue that was contained in the last preceding catalogue, the Secretary must explain the omission by stating whether the member, whose name is omitted, is dead, has withdrawn, has removed, been expelled, or suspended. Any auxiliary Society that fails to comply with this requirement shall be held to be in contempt, and none of its members shall be allowed to participate in the business of this Society, or be entitled to any of its rights or privileges, until such Society shall have purged itself of the contempt.

SEC. 5. In case of the death of any of its members, who are also members of this Society, it shall be the duty of the Secretary of each auxiliary Society to transmit to the Secretary of this Society a suitable obituary notice for publication.

ARTICLE V.

OFFICERS.

SEC. 1. The officers of this Society shall be a President, four Vice-Presidents, Secretary, Assistant Secretary, and a Treasurer and Librarian.

SEC. 2. The officers shall be elected by a ballot vote of a majority of all the members present, shall enter upon their duties at the close of the meeting at which they were elected, and shall serve one year, or until their successors are elected.

SEC. 3. All vacancies in office, occurring in the interim of the meetings, shall be filled by appointment of the President.

ARTICLE VI.

DUTIES OF OFFICERS.

SEC. 1. The President shall preside over the meetings, preserve order, call meetings when in his judgment the interest of the Society may require, deliver an address, and perform such other duties as custom and parliamentary usage may require.

SEC. 2. The Vice-Presidents shall assist the President in the performance of his duties, and, in his absence, preside over the meetings, in the order of their seniority.

SEC. 3. The Secretary shall keep correct minutes of the proceedings of the Society, and prepare and furnish the same to the Committee on Publication, for publication in the Transactions, notify Committees and Society Delegates of their appointment, take charge of all manuscripts, papers, etc., read at the various meetings, and transfer the same to the Committee on Publication for publication; give due notice of the annual meetings, conduct all business correspondence, give official notice to all auxiliary Societies of resolutions, &c., passed by this Society that have reference to the said Societies, and also notify them of the time for making their reports to this Society, and perform all other duties which the common usage of other corporate or organized bodies may require. His salary shall be $75 per annum.

SEC. 4. The Assistant Secretary shall assist the Secretary in the performance of his duties as the latter may

require, and act for him in his absence. His traveling and hotel expenses shall be borne by the Society.

SEC. 5. The Treasurer and Librarian shall receive all moneys due the Society, pay all bills countersigned by the Secretary, keep a correct, itemized account of all receipts and expenditures, with all vouchers, and make a full report of the same at each annual meeting. He shall have charge of all the books, manuscripts (not specially belonging to the Secretary), instruments, specimens, preparations, and other scientific property belonging to the Society, keeping a complete catalogue of the same, and report the condition of this department at the annual meeting. He shall give bond for the faithful performance of his duties, in the sum of twice the amount of money in his possession, with two sureties, said bond to be deposited with the Secretary. His salary shall be $75 per annum.

SEC. 6. The officers shall deliver all records, books, funds and other property belonging to their several offices. to their successors, when the latter shall enter upon the discharge of their respective duties.

ARTICLE VII.

COMMITTEES.

The Committees of this Society shall be Standing and Temporary. Standing Committees are those whose duties continue from year to year. They shall each consist of five members. and, unless otherwise specified, shall be elected by the Society, one member being elected each year, except the first year, when one member shall be elected for five years, one for four, one for three, one for two, and one for one year. The Standing Committees shall be: Committees on Arrangements, Finance, Admissions and Medical Societies. Ethics, Publication, and Medical Legislation. Temporary Committees are those whose functions cease with the meeting at which they are appointed. They shall be appointed by the President, as the necessity for their existence arises.

ARTICLE VIII.

STANDING COMMITTEES AND THEIR DUTIES.

SEC. 1. The Committee on Arrangements shall, if no sufficient reason prevent, be mainly composed of members

at the place where the next annual meeting is to be held. It shall provide suitable rooms and accommodations for the meeting, and, in all matters not otherwise provided for, superintend and protect the general interests of the Society. This Committee shall be appointed annually by the President.

SEC. 2. The Committee on Finance shall superintend the monetary affairs of the Society, inspect and audit all bills and accounts of the Treasurer, examine and determine the amount, and make such assessment, by a *pro rata* tax upon the Permanent Members, as may be necessary for incidental expenses, and perform such other duties as may devolve upon it.

SEC. 3. The Committee on Admissions and Medical Societies shall examine and pass upon the qualifications of Delegates, and the applications for admission of auxiliary Societies, and perform such other duties as may devolve upon it.

SEC. 4. The Committee on Ethics shall examine and report for the action of the Society, all cases of appeal from the auxiliary Societies, and such other matters as may be referred to it by the Society. If any member shall be charged, in writing, with any violation of the provisions of this Constitution and By-Laws, or with unprofessional conduct, a copy of such charge shall be furnished to him by the Secretary, and himself and accuser cited to appear, when the Committee shall proceed to hear the case, reserving its decision to be reported to the Society; except that any case may be referred to an auxiliary Society for adjudication, and from the decision of the auxiliary Society an appeal may be carried to this Society. Reports from this committee, when unanimous, shall be acted upon without debate.

SEC. 5. The Committee on Publication, of which the President and Secretary shall be members *ex-officio*, shall examine all papers presented to the Society, and have printed in the Transactions such as it deems worthy of publication.

SEC. 6. The Committee on Legislation shall watch the course of State legislation on medical subjects, and take charge of such matters as shall be referred to it by the Society. All proposed legislation offered by any member

of this Society, and all resolutions touching medical legislation, shall be referred to this committee, which shall make a report thereon to this Society as soon as possible. It shall also, at each anuual meeting, report to the Society any laws relating to medical matters that may have been passed within the year.

SEC. 7. The Standing Committees shall keep regular minutes of their proceedings, and furnish an authenticated copy thereof, to be deposited with the Librarian.

ARTICLE IX.

DELEGATES.

SEC. 1. The Delegates appointed by this Society to the American Medical Association or to other Societies, shall report briefly, in writing, through their Chairman, such items of general interest as may have claimed the attention of the bodies to which they were respectively delegated.

ARTICLE X.

MEETINGS.

SEC. 1. The meetings of this Society shall be annual, and shall occur at such time and place as the Society may appoint. Provided, that special meetings may be called at any time by the President, and shall be so called by him on the written request of twenty-five members. Due notice of all the meetings shall be given by the Secretary, and in case of a special meeting the object for calling said meeting shall be distinctly set forth in the notice.

SEC. 2. Fifteen Permanent Members shall constitute a quorum for the transaction of business.

ARTICLE XI.

CODE OF ETHICS.

The Society adopts, as a part of its regulations, the Code of Ethics of the American Medical Association.

ARTICLE XII.

AMENDMENTS.

Every proposal for amending the Constitution shall be made in writing; and, if such amendment receive a ma

jority of four-fifths of the Permanent Members present, it shall be adopted; but otherwise, the amendment shall lie over until the next meeting, when it may be adopted by a majority of two-thirds of the Permanent Members present.

ARTICLE XIII.

Nothing in this Constitution shall be so construed as to deprive any one now a member of this Society, of any rights or privileges held by him before the adoption of this Constitution, unless voluntarily surrendered by him.

BY-LAWS.

I.

ORDER OF BUSINESS.

1. The President, or, in his absence, one of the Vice-Presidents, shall call to order; or, in case of the absence of all these officers, a chairman shall be appointed *pro tempore*.
2. Reading of minutes. Report of the Committee of Arrangements (on first day).
3. President's address (afternoon of second day).
4. Election of officers (afternoon of second day).
5. Selection of a place for the next meeting (afternoon of second day).
6. Business which requires early consideration.
7. Reports of Standing Committees.
8. Reports from Delegates to the American Medical Association, and other Societies.
9. Written communications on medical subjects (papers).
10. Oral communications.
11. New business.
12. Unfinished and miscellaneous business.
13. Adjournment.

II.

In filling blanks, the longest time and the largest sum shall be first put.

III.

Any three Permanent Members may call for the ayes and noes.

IV.

All questions of order, not especially provided for, shall be decided according to Cushing's Manual of Parliamentary Practice.

V.

Not to exceed thirty minutes shall be allowed for the reading of any paper.

VI.

No paper shall occupy over thirty pages of the Transactions.

VII.

All reports, papers and addresses presented to this Society by its members are the property of the Society, and shall be referred. without motion and without recommendation, to the appropriate committee; and it shall be considered a misdemeanor for the author of any such report or paper to permit the same to be published except as authorized by special vote of the committee or the Society.

VIII.

No speaker shall be allowed to speak a second time, on the same subject, without the consent of the Society.

IX.

The time allowed each speaker shall not exceed ten minutes, except by general consent.

X.

The motion to adjourn, to lie on the table, or for the previous question, shall be decided without debate.

XI.

The motion for the Previous Question, if decided in the negative, shall have no effect on the main question.

XII.

Any of these by-laws may be suspended at any time by a three-fourths vote of the Permanent Members present.

Every proposed amendment must be offered in writing; if it receive a four-fifths vote of the Permanent Members present, it shall be adopted; but otherwise it shall lie over until the next meeting, when it may be adopted by a majority of two-thirds of the Permanent Members present.

LIST OF MEMBERS

OF THE

Ohio State Medical Society,

WITH THEIR

POST OFFICE ADDRESS AND DATE OF ADMISSION.

Adams, P A	Dayton	1885
Alcorn, A W	Ravenna	1870
Allen, D B	West Liberty	1865
Allen, Dudley	Oberlin	1870
Allen, Dudley P	Cleveland	1885
Allen, Harlan P	Columbus	1884
Amidon, Rebecca S	Painesville	1886
Anderson, James	Salem	1884
Anderson, W G	Columbus	1884
Asbury, T B	Jerome	1878
Ash, William N	Toledo	1887
Axline, C	Fultonham	1884
Ayers, S C	Cincinnati	1877
Bain, F D	Kenton	1885
Baker, A R	Cleveland	1886
Baker, George G	Akron	1884
Baker, W O	Louisville	1882
Baldwin, J F	Columbus	1875
Ballinger, J B	Versailles	1880
Ballinger, Wm. J	Plain City	1864
Barnes, W T	Fredericksburg	1879
Barnhill, J U	Columbus	1884
Barrere, D M	New Carlisle	1884
Barton, T J	Zanesville	1881
Battles, W S	Shreve	1858
Bauer, F J	Mogadore	1886
Bauer, M M	Lake	1884
Beach, J N	West Jefferson	1854
Beach T D	Catawba	1884
Beardsley, C E	Ottawa	1869

Beck, J S	Dayton	1879
Beers, A M	Newcomerstown	1882
Belden, A C	Akron	1878
Belt, W A	Kenton	1887
Bessey, J Mortimer	Toledo	1887
Bennitt, J	Cleveland	1869
Beverly, P F	Columbus	1862
Bishop, S P	Delta	1870
Blair, James F	Linwood	1884
Blake, W H	Shadeville	1878
Bleile, A M	Columbus	1882
Bœrstler, G W	Lancaster	1870
Bowen A H	London	1878
Boylan, A	Milford Centre	1878
Bramble, D D	Cincinnati	1870
Brannan, T H	Canal Dover	1884
Brashear, B B	Akron	1886
Brayton, F W	Carey	1881
Bricker, W R	Shelby	1884
Brinkerhoff, D H	Fremont	1853
Brison, H C	Millersport	1884
Brockett, A J	Bristolville	1874
Brown, H H	Lyons	1887
Brown. H M	Hillsboro	1882
Brown, J A	Germantown	1886
Brundage, A H	Xenia	1878
Brush, E C	Zanesville	1878
Buckingham, John M	Springfield	1885
Buckner, J H	Cincinnati	1863
Buechner, W L	Youngstown	1879
Buffett, Lewis	Cleveland	1880
Bunce, Wm	Oberlin	1864
Bunn, J W	West Union	1882
Burton, E D	Collamer	1880
Butler, G W	Columbus	1869
Caldwell, Wm	Fremont	1886
Caldwell, W W	Hamilton	1874
Carmichael, W A	Loveland	1871
Carpenter, A B	Cleveland	1886
Carpenter, Julia W	Cincinnati	1879
Carr, E C	Coshocton	1882
Carrick, A L	Cincinnati	1871

Case, F D	Ashtabula	1886
Chamberlain, D P	Toledo	1874
Chapman, Byron	Copley	1885
Chapman, W C	Toledo	1875
Chase, James L	Toledo	1874
Chaney, H L	Columbus	1886
Clark, C F	Columbus	1885
Clark, John H	Mechanicsburg	1869
Cline, J W	Germantown	1886
Coldham, James	Toledo	1884
Coleman, N R	Columbus	1875
Collamore, G A	Toledo	1880
Colvill, G H	Harrisville	1887
Conklin, W J	Dayton	1868
Conn, Eli	Akron	1887
Conner, P S	Cincinnati	1868
Cook, Alta F	Sandusky	1885
Cook, G F	Oxford	1885
Cooper, A	Columbus	1881
Corlett, W T	Cleveland	1882
Corson, O M	Middletown	1879
Courtwright, A P	Circleville	1871
Courtwright, G S	Lithopolis	1867
Covington, P D	Bellefontaine	1881
Cowan, Chas S	Harden	1885
Cox, J M	South Salem	1877
Craig, J Harvey	Mansfield	1886
Craig, J W	Mansfield	1874
Crane, A M	Marion	1881
Crum, Edward C	Dayton	1885
Culbertson, Howard	Zanesville	1855
Cushing, H K	Cleveland	1857
Dandridge, N P	Cincinnati	1871
Darby, F H	Morrow	1882
Daugherty, J D	Dayton	1879
Davis, A A	Abilene, Kansas	1884
Davis, B W	Marion	1878
Davies, W C	Granville	1882
Davis, Wm B	Cincinnati	1865
Dawson, J O	Lincoln, Neb.	1881
Dawson, W W	Cincinnati	1853
Denman, W C	Marion	1882

De Vilbiss, Allen	Toledo	1387
Dickey, John A	Goshen	1884
Dickey, Thomas A	Middletown	1879
Dimmick, O A	Chardon	1884
Dimond, Henry C	Springfield	1885
Dissinger, H	Canal Fulton	1885
Donahoe, H J	Sandusky	1854
Donnellan, J E	Germantown	1879
Dorman, W	Ashtabula	1886
Drake, I L	Lebanon	1859
Dumm, S C	Columbus	1877
Duncan, A M	Bucyrus	1886
Duncan, James A	Toledo	1874
Dunlap, Alexander	Springfield	1854
Dunlap, C O	McArthur	1881
Dunlap, C W	Springfield	1869
Dutton, C F	Cleveland	1880
Dwyer, R D	New Petersburg	1879
Eckman, Hiram	Tuscarawas	1869
Elster, L A	Jeffersonville	1884
Emery, W H	Mt. Sterling	1881
Erwin, R W	Bay City, Mich	1872
Evans, A E	Columbus	1882
Evans, R P	Franklin	1879
Everhard, N S	Wadsworth	1870
Everts, Orpheus	College Hill	1885
Fackler, J E	Versailles	1879
Ferguson, J W	Congress	1882
Ferrell, C B	Columbus	1878
Firestone, L	Wooster	1852
Fisher, H M	Akron	1881
Fisher, P Q	Nashport	1873
Floyd, J C M	Steubenville	1884
Follett, Alfred	Granville	1864
Foltz, Abner E	Akron	1886
Forbes, S F	Toledo	1856
Foster, G F	Kingston Center	1882
Fowler, S W	Delaware	1873
Frankenberg, O	Columbus	1873
Franklin, G S	Chillicothe	1876
Fraunfelter, James	Canton	1886
Freeman, George	Richmond Dale	1885

Fuller, S W	Bellefontaine	1853
Galbraith, E G	Frankfort	1876
Gale, C Bernard	Newport	1886
Galer, Frank M	DeGraff	1874
Gawne, A J	Sandusky	1870
Gay, N	Columbus	1848
Gibson, Richard D	Youngstown	1882
Gill, H Z	Eldorado, Kan.	1884
Gillespie, J M	Bloomingburg	1880
Gilliam, D T	Columbus	1873
Goodhue, George	Dayton	1884
Goodson, J W	Sterling, Kan.	1874
Gordon, Joseph C	Mt. Vernon	1886
Gordon, T W	Georgetown	1849
Goss, J H	Lancaster	1884
Graefe, Wm	Sandusky	1874
Granger, F M	Russell's Station	1881
Gray, F C	Lewisburg	1879
Greene, D W	Dayton	1882
Green, H S	Cardington	1878
Green, J W	Fairfield	1853
Grill, S P	Orrville	1885
Groves, J E	Uhrichsville	1884
Gruwell, J P	Damascus	1884
Guerin, Z F	Columbus	1884
Guittard, A M	Mt. Hope	1886
Guittard, F J	New Bedford	1875
Gunsaulus, F	Columbus	1886
Haldeman, J S	Zanesville	1885
Halderman, D	Columbus	1869
Hall, R B	Chillicothe	1884
Hall, C	Burlington	1872
Hall, W W	Springfield	1882
Hamilton, H A	Perrysburg	1886
Hamilton, J W	Columbus	1849
Hamilton, Wm D	Columbus	1886
Hammel, M	Circleville	1878
Hardy, J M	Whipple	1886
Harmon, Julian	Warren	1886
Harrison, Eugene B	Hutchinson, Kan	1869
Hart, B F	Marietta	1854
Hart, Samuel	Marietta	1887

Hartman, G W	Archbold	1887
Hartman, S D	Tippecanoe City	1874
Hathaway, H H	East Toledo	1874
Haverfield, J W	Uhrichsville	1886
Hedges, W B	Delaware	1878
Heffner, C W	Bellefontaine	1885
Heiter, Carl	Sandusky	1875
Heistand, E B	Kenton	1884
Henderson, D W	Marysville	1856
Henderson, J P	Newville	1850
Hendrickson, Hugh	Columbus	1868
Herrick, H J	Cleveland	1868
Herrick, L C	Columbus	1871
Hill, C C	Levering	1884
Hill, N S	Newville	1866
Hill, H	West Alexandria	1867
Hillbish, F S	Fremont	1876
Himes, Isaac N	Cleveland	1874
Hinckley, H D	Oxford	1887
Hiner, S B	Lima	1874
Hines, J A	Van Wert	1879
Hipple, J R	Waldo	1881
Hixon, M M	Dupont	1887
Hoff, J W	Pomeroy	1872
Holliday, B W	Cleveland	1875
Hoover, C C	Ross	1880
Hoover, C M	North Benton	1885
Hough, W S	Cuyahoga Falls	1875
House, A F	Cleveland	1880
Howard, E W	Akron	1852
Hughes, M A	Port Clinton	1877
Hughs, J H	Delaware	1884
Humiston, W H	Cleveland	1880
Hunter, T S	Ashland	1878
Hurd, A	Findlay	1870
Hueston, R C	Oxford	1868
Hyatt, E H	Delaware	1862
Iddings, A H	Dayton	1879
Ikirt, G P	East Liverpool	1882
Ireland, W E	Washington C. H.	1887
Jacobs, W C	Akron	1881
Jennings, E	Dayton	1867

Jewett, George F	Hilliard	1884
Jewett, W H	West Caanan	1869
Jewett, H S	Dayton	1871
Johnson, Homer	Oberlin	1880
Johnson, O	Worthington	1878
Jones, John D	Cincinnati	1887
Jones, T	London	1878
Jones, T W	Columbus	1847
Jones, R E	Gomer	1863
Jones, W W	Toledo	1849
Jones, J D	Newburg	1870
Judkins, C P	Cincinnati	1878
Kahle, A W	Lima	1887
Kahle, R D	Lima	1887
Keller, Thomas F	New Washington	1887
Kelly, H R	Galion	1868
Kelly, W J	Galion	1881
Kemper, A C	Cincinnati	1871
Kendig, E V	Hayesville	1874
Kerr, John N	Mechanicsburg	1884
King, E Y	Richwood	1882
King, C W	Dayton Insane Asylum	1881
King, John I	Burg Hill	1884
Kinkead, W W	Nashville, Tenn.	1884
Kinsman, D N	Columbus	1864
Kirkley, C A	Toledo	1874
Knowlton, A P	Berea,	1870
Koogler, M A	DeGraff	1884
Kreiger, G L	Lebanon	1884
Kurz, C E	Bellair	1875
Landon, C P	Westerville	1851
Larimore, F C	Mt. Vernon	1871
Lathrop, A B	Swanton	1887
Lash, H M	Athens	1879
Lash, J M	Chillicothe	1879
Lee, E B	Garrettsville	1870
Leonard, B B	West Liberty	1854
Leonard, B S	West Liberty	1882
Leslie, J M	Frankfort	1878
LeVan, D H	Mt. Victory	1879
Lewis, W C	Rushville	1869
Little, D	Logan	1882

Loving, S	Columbus	1858
Lowman, J H	Cleveland	1877
Lyman, C N	Wadsworth	1852
Mack, John	Shelby	1853
Macready, J	Monroe	1885
Maris, Clarence	Columbus	1887
Markle, I F	Mifflin	1881
Martin, J T	Green Camp	1884
McClung, Jno. C	Leipsic	1887
McClure, James	Marietta	1866
McCollum, E J	Tiffin	1871
McConnell, D W	Marseilles	1884
McConnelly, F C	Vermillion	1875
McCready, J	Monroe	1885
McCurdy, John	Youngstown	1870
McCurdy, S L	Dennison	1882
McCowell, John O	Delaware	1884
McEbright, T	Akron	1866
McElwe, S	Newcastle	1866
McGavran, S B	Cadiz	1887
McGee, J B	Cleveland	1880
McGrew, Henry	Pleasant Ridge	1878
McIlhenny, J J	Dayton	1846
McIntyre, W	Warrensburg	1881
McKean, William	Dundee	1885
McKee, E S	Cincinnati	1886
McKim, F E	Marietta	1886
McKinley, E B	Vaughnsville	1887
McLean, J T	New Philadelphia	1884
McMillen, J W	Mt. Vernon	1878
McMurray, A B	Marion	1879
McNeely, J S	Hamilton	1885
McPherson, J T	Cambridge	1884
Merrill, A E	Vermillion	1876
Merriman, E D	Conneaut	1884
Merriman, D J	Painesville	1884
Merriman, C R	Akron	1882
Metzler, A S	Baltic	1874
Mills, J T	Jersey	1878
Miller, A C	Cleveland	1858
Millikin, B L	Cleveland	1885
Millikin, Dan	Hamilton	1879
Montgomery, H B B	Gilboa	1881

Moore, D D	Xenia	1879
Moore, L G	Kinsman	1878
Morris, Jonathan	Ironton	1853
Morris, Joseph	Columbus Grove	1879
Morse, D A	Oxford	1868
Mory, J J	St. Henry's	1871
Mory, D B	Wilmington	1884
Mosgrove, James M	Urbana	1884
Mounts, J L	Morrow	1860
Murbach, A J	Archbold	1874
Murphy, J A	Cincinnati	1872
Murray, L S	Medina	1870
Muscroft, C S	Cincinnati	1854
Myers, I A	Shelby	1881
Nash, E K	Montrose	1886
Nash, W H H	Columbus	1874
Nau, J G	Carroll	1878
Neil, Alexander	Columbus	1868
Nelson, H W	Steubenville	1878
Newman, J E	Gilboa	1880
Norris, T B	Alton	1882
Nunemaker, H B	Philadelphia In. Asy.	1875
Ogan, Ambrose	Sedalia	1884
Ousley, J B	Jacksonburg	1871
Palmer, C D	Cincinnati	1871
Parker, Charles B	Cleveland	1886
Patterson, A V	Mansfield	1861
Patterson, James W	Olena	1885
Pearce. H C	Urbana	1867
Pennell, W W	Fredericktown	1884
Pettitt, R R	Dayton	1885
Pickard, P	Mt. Vernon	1878
Pomereme, P P	Berlin	1870
Pomeroy, F S	Mountville	1884
Pomeroy, O	Chardon	1869
Pope, F F H	Dalton	1885
Powell, W S	Defiance	1881
Preston, J C	Cleveland	1857
Price, Joseph	Randolph	1852
Priest, S C	Newark	1878
Quinn, A T	Wilmington	1881
Rankin, T W	Kirkersville	1881

Ranney, S W	Hope	1878
Ransohoff, Joseph	Cincinnati	1879
Reamy, T A	Cincinnati	1855
Reed, C H	Toledo	1873
Reed, C A L	Hamilton	1881
Reed, E J	Leipsic	1878
Reed, R C S	Stockton	1867
Reed, R Harvey	Mansfield	1884
Reeve, J C	Dayton	1861
Reinhart, J C	Toledo	1887
Rheinfrank, J H	Perrysburg	1886
Rhu, Auguste	Marion	1886
Ricketts, E S	Portsmouth	1882
Ricketts, B M	Cincinnati	1884
Ridenour, A W	Massillon	1886
Ridgway, N B	Galion	1878
Riggs, J M	Bryan	1873
Robison, J D	Wooster	1856
Roebuck, D Y	Dalton	1886
Rodgers, J H	Springfield	1859
Rosenwasser, M	Cleveland	1880
Row, G T	Circleville	1881
Russ, R C	Hillsborough	1880
Russell, E S	Tuscarawas	1880
Russell, John E	Mt. Vernon	1886
Ryan, George W	Cincinnati	1884
Sager, J	Celina	1882
Santee, Leon B	Marlborough	1885
Sattler, Robert	Cincinnati	1872
Saxton, O H	Washington C. H.	1884
Scheibenzuber, A	Dayton	1885
Schnetzler, H M	Toledo	1874
Schueller, J B	Columbus	1869
Schwan, F W	Poplar	1880
Scott, A C	Bladenburg	1884
Scott, B B	Mt. Vernon	1884
Scott, Daniel A	Akron	1884
Scott, R E	Bowerston	1887
Scott, W A	Swanton	1878
Scott, W J	Cleveland	1855
Scott, Xenophon C	Cleveland	1874
Scoville, S S	Lebanon	1859

Seeley, W W	Cincinnati	1871
Seys, Henry H	Springfield	1885
Shaffner, Jno. F	Willshire	1887
Sharp, B M	Sidney	1885
Sharp, H J	London	1882
Sheldon, S B	Five Mile	1882
Shepherd, W W	Hillsborough	1871
Sherrard, A C	Oakwood	1887
Shively, J W	Kent	1886
Silver, D R	Sidney	1870
Sinnett, E	Granville	1850
Sisler, L E	Clinton	1887
Skinner, S W	Wagon Work	1881
Slocum, C E	Defiance	1874
Smart, A R	Toledo	1887
Smith, C N	Toledo	1887
Smith, D B	Cleveland	1870
Smith, J M	New Philadelphia	1884
Smith, W S	West Milton	1886
Smith, William G	Palmyra	1885
Snodgrass, J	Kenton	1878
Snyder, D J	Scio	1850
Snyder S P	New Bedford	1882
Souders, Samuel	Dean	1879
Southard, J M	Marysville	1860
Southard, J Q	Raymond	1882
Speer, A T	Newark	1878
Spencer, E R	Doylestown	1885
Sperry, W	Tallmadge	1886
Spooner, H K	Republic	1880
Stanley, E	Sandusky	1870
Stark, W	Cincinnati	1871
Stansell, J A	Forest	1866
Starch, A B	Milan	1880
Stephens, Alfred H	Eaton	1884
Stevens, E B	Lebanon	1853
Stevens, Edward S	Cincinnati	1886
Stevens, M B	Defiance	1887
Stewart, T H	Church Hill	1877
Stewart, W D	Pemberville	1887
Stillwell, Thomas	Fremont	1857
Stockstill, J N	New Carlisle	1867

Storey, William	Castalia	1884
Strain, A J	London	1881
Sweney, R L	Marion	1859
Szendery, L	Sandusky	1887
Tauber, B	Denver, Col.	1876
Taylor, W H	Cincinnati	1874
Telfair, Geo. M	Bloomington	1884
Teters, B F	Berlin	1886
Thomas, F W	Marion	1884
Thompson, J C	South Bloomfield	1848
Thorn, E J	Yellow Springs	1878
Thorn, S S	Toledo	1873
Thrasher, A B	Cincinnati	1876
Tichenor, E J	Lebanon	1869
Tobey, H A	Lima	1878
Tracy, J L	Toledo	1884
Trimble, R T	New Vienna	1881
Turney, Joseph	Nevada	1864
Uhler, H L	Marion	1885
Underhill, J W	Cincinnati	1874
Underwood, W J	Akron	1869
Vail, J B	Lima	1885
Vannata, E	Fultonham	1855
Vance, R A	Cleveland	1881
Vandervort, J W	Harveysburg	1864
Van Pelt, C L	Toledo	1887
Van Winkle, N B	Blanchester	1885
Vigor, F A	New Dover	1884
Wagenhals, F	Columbus	1885
Waggoner, Joseph	Ravenna	1870
Walker, A B	Canton	1882
Wallace, John	Rushsylvania	1879
Ward, C S	Warren	1875
Ward, W A	Conneaut	1880
Warner, A D	Fullertown	1880
Warner, Frank	Columbus	1884
Watson, D	Bellefontaine	1882
Weaver, J M	Dayton	1865
Webster, E W	Kingsville	1876
Weed, F J	Cleveland	1870
Weed, T A	Cleveland	1880
Weeks, O W	Marion	1884

Wellons, G S	Barnesville	1878
Wells, Edward F	Minster	1884
Welty, O S	Canal Dover	1886
West, John E	St. Clairsville	1884
West, T J	Tiffin	1875
Whistler, H	New Antioch	1881
White, Horace W	Delaware	1887
Whittaker, J T	Cincinnati	1871
Wilkins, John A	Delta	1874
Wilson, D C	Ironton	1872
Wilson, E J	Columbus	1884
Wilson, J L	Greenfield	1871
Williams, A L	North Lewisburg	1885
Williams, A S	Fostoria	1852
Williams, E	Cincinnati	1856
Williams, J L	Cardington	1878
Williams, T B	Cleveland	1886
Willard, G P	Tiffin	1875
Winslow, J W	Spring Mountain	1881
Wire, G W	Wilmington	1885
Wirth, R	Columbus	1886
Wise, D B	Mt. Eaton	1881
Wise, S P	Millersburg	1875
Wood, J S	Cleveland	1880
Woodbridge, John E	Youngstown	1886
Woods, J T	Toledo	1862
Woods, D B	Warren	1852
Woodruff, L	Alton,	1867
Woodward, W R	Cincinnati	1871
Wright, John A	Toledo	1885
Wright, John W	Columbus	1885
Wright, S St.J	Tallmadge	1880
Wylie, J L	Ripley	1872
Yost, W N	Mt. Blanchard	1879
Zenner, Philip	Cincinnati	1882
Zeigler, H H	Ayersville	1884

NON-RESIDENT PERMANENT MEMBERS.

Ludington, H	Omaha, Neb	1871
Martin, G	Adrian, Mich	1877

HONORARY AND CORRESPONDING MEMBERS.

Professor Ferdinand Hebra*, Vienna, Austria.
Professor Isidore Neumann, Vienna, Austria.
Professor Herman Weiderhofer, Vienna, Austria.
Professor Carl Sigmund*, Vienna, Austria.
Professor Herman Zeissl*. Vienna, Austria.
Professor Ed. C. Seaton*, Medical Inspector of the Privy Council, London, England.
Professor M. Jules Guerin, Member Imperial Academy of Medicine, Paris, France.

HONORARY MEMBERS.

*Awl, W M	Columbus	1872
*Bailey, M J	New York City	1852
*Baron, P	Ravenna	1870
Bartholow, Roberts	Philadelphia, Pa	1879
Beeman, P	Sidney	1872
Blackburn, J C	Covington, Ky	1857
*Boerstler, G W	Lancaster	1865
Brodie, William	Detroit, Mich	1875
*Brower, J H	Lawrenceburg, Ind	1854
*Childs, H H	Pittsfield, Mass	1848
*Conant, H	Maumee City	1874
*Dalton, N	Mineral Point, Wis	1871
Gundry, Richard	Catonsville, Md	1879
*Guthrie, C B	New York City	1849
Harding, M H	Lawrenceburg, Ind	1854
Haughton, R E	Richmond, Ind	1863
*Hayes, I	Philadelphia, Pa	1857
*Hempstead, G S B	Portsmouth	1872
Hibberd, James F	Richmond, Ind	1871

*Deceased.

Hill, E L	Oxford	1856
*Hunt, S P	Richmond, Ind	1866
Jenks, E W	Detroit, Mich	1875
Kerr, John	Canton, China	1875
*Kirtland, Jared P	Cleveland	1874
Kitchen, J M	Indianapolis, Ind	1866
*Knight, J	New Haven, Conn	1849
*Lee, Charles A	New York City	1848
Lyons, W B	Huntington, Ind	1866
*McIlvaine, R R	New York City	1871
*Moe, L W	Ottawa	1876
*Mussey, R D	Cincinnati	1865
Noyes, J F	Detroit, Mich	1875
*Parker, Willard	New York City	1852
Safford, E D	Parkersburg, W. Va	1870
Steele, H K	Denver, Col	1872
Stevenson, J M	Pittsburgh, Pa	1866
*Sutton, George	Aurora, Ind	1854
Sutton, R S	Pittsburgh, Pa	1884
*Thompson, Robert	Columbus	1865
*Trevitt, William	Columbus	1858
*Tully, William	New Haven, Conn.	1849

*Deceased.

Code of Medical Ethics.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ART. I.—*Duties of physicians to their patients.*

SEC. 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

SEC. 2. Every case committed to the charge of a physician should be treated with attention, steadiness and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circum-

stances, been protected in their observance of secrecy by courts of justice.

SEC. 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician and render him liable to be suspected of interested motives.

SEC. 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influences of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

SEC. 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty which is independent of, and far superior to, all pecuniary consideration.

SEC. 6. Consultations should be promoted in difficult

of [illegible] cases as they give rise to confidence, energy, and more enlarged views in practice.

SEC. 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients suffering under the consequences of vicious conduct, ought never to be neglected. His counsels or even remonstrances will give satisfaction, not offense, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. II.—*Obligations of patients to their physicians.*

SEC. 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

SEC. 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

SEC. 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits, and predispositions of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

SEC. 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

SEC. 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

SEC. 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be pursuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by con-

travening the plan of teatment adopted by the physician.

SEC 7. A patient should, if possible, avoid even the *friendly visits of a phycician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that the physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

SEC. 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

SEC. 9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

SEC. 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ART. I.—*Duties for the support of professional character.*

SEC. 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the

government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

SEC. 2. It is not in accord with the interests of the public or the honor of the profession that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with, the graduation of persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine.

SEC. 3. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

SEC. 4. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or hand-bills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

SEC. 5. Equally derogatory to professional character is it for a physican to hold a patent for any surgical in-

strument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ART. II.—*Professional services of physicians to each other.*

SEC. I. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitious services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed, which the party receiving would wish not to incur.

ART. III.—*Of the duties of physicians as respects vicarious offices.*

SEC. I. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of

courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercises of this fraternal courtesy, without awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ART. IV.—*Of the duties of physicians in regard to consultations.*

SEC. 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent, regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good, moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry.

SEC. 2. In consultations, no rivalship or jealousy should be indulged; candor, probity and all due respect should be exercised towards the physician having charge of the case.

SEC. 3. In consultations, the attending physician should be first to propose the necessary questions to the

sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

SEC. 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment, as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

SEC. 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will, of course, see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter

case he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

SEC. 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

SEC. 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

SEC. 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but, if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case,

SEC. 9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordi-

nary portion of both time and attention, at least a double honorarium may be reasonably expected.

SEC. 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary should be justified as far as it can be, consistently with a concientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ART. V.—*Duties of physicians in cases of interference.*

SEC. 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

SEC. 2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

SEC. 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted *relative to the nature of the disease, or the remedies employed,* but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the

latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances, no unjust or illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

SEC. 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation is desired, to resign the care of the patient to the latter immediately on his arrival.

SEC. 6. It often happens in cases of sudden illness, or of recent accidents or injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

SEC. 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

SEC. 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who

is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to the present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction unless it is expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

SEC. 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficial one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

SEC. 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ART. VI.—*Of differences between physicians.*

SEC. 1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court medical*.

SEC. 2. As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette, through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ART. VII.—*Of pecuniary acknowledgements.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgements* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ART. I.—*Duties of the profession to the public.*

SEC. 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations; the location, arrangement and dietaries of hospitals, asylums, schools, prisons, and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy on their own lives.

SEC. 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroner's inquests and courts of justice on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post-mortem* examination, it is just, in consequence of the time, labor and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

SEC. 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should

be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services ; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform military duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

SEC. 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and imposters. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the public to physicians.*

SEC. 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism ; to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

EXPLANATORY DECLARATIONS.

(ADOPTED IN 1885.)

WHEREAS, Persistant misrepresentations have been, and still are being made, concerning certain provisions of the Code of Ethics of this Association, by which many in the community, and some even in the ranks of the profession, are led to believe those provisions exclude persons from professional recognition, simply because of differences of opinions or doctrines; therefore,

1. *Resolved,* That clause first, of Art. IV. in the National Code of Medical Ethics, is not to be interpreted as excluding from professional fellowship, on the ground of differences in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of the said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

2. *Resolved,* That it constitutes a voluntary disconnection or withdrawal from the medical profession proper, to assume a name indicating to the public a sectarian, or exclusive system of practice, or to belong to an association or party antagonistic to the general medical profession.

3. *Resolved,* That there is no provision in the National Code of Medical Ethics, in any wise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations, cannot be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code.

But no such emergency or circumstances can make it necessary or proper to enter into formal professional consultations with those who have voluntarily disconnected themselves from the regular medical profession, in the manner indicated by the preceding resolution.

INDEX.

Abdominal Surgery..... 121, 129
Abortion, retained placenta..... 179
Amendments, postponed..... 21
Auxiliary Societies, list of..... 26
    Full list of members of..... 256
    List of new..... 23
    Membership of, resolution..... 15
    Represented..... 24
BAKER, A. R., Eyesight and Hearing of Railroad Men..... 45
BEACH, WM. M., Obituary..... 236
Breasts, inflammation of..... 75
CARPENTER, A. B., Uterine Hemorrhage..... 187
Cholera Infantum..... 137
COLLAMORE, G. A., Phytolacca Decandra..... 75
Collective Investigation of Disease, Dr. X. C. Scott..... 18
Committees filled..... 10, 12
Committee on State Board of Medical Examiners..... 15
CONN, E., Therapeutic Forces..... 159
CORLETT, WM. T., Electricity in Dermatology..... 99
DARBY, F. H., Expert Testimony..... 93
Dermatology, Electricity in..... 99
Disclaimer..... 28
Eczema Infantile..... 57
Election of officers..... 16
Electricity in Dermatology..... 99
Ethics, report of Committee..... 21
Expert testimony..... 93
    Resolution for Committee..... 17
    Report of Committee..... 18
Eyesight of Railroaders..... 45
Finance Committee's report..... 10
FORBES, S. F., Amputation for Osteo-Cancer..... 67
HALL, R. B., Laparotomy..... 129
HAMILTON, W. D., Abdominal Surgery..... 121
HARMON, JULIAN, Whooping Cough..... 155
Hearing of Railroaders..... 45

INDEX.

Hematocele, Intra-peritoneal, ... 33
Hernia, cure of 171
HERRICK, H. J., Cure of Hernia 171
Humerus, fractures of lower end of 223
Hysterectomy, Vaginal 193
Insanity, physical conditions pathogenetic 79
Intra-peritoneal Hematocele 33
JONES, W. W., Laws of Ohio regulating Practice 115
Resolution to print 1000 extra copies of paper 19
Laparotomy 121–129
Laws of Ohio regulating Practice 115
Legislation, report on 12
Librarian's report 7
LOUGHEAD, B. B., Retained placenta in abortion 179
MARSHALL, O. W., Obituary 233
MCEBRIGHT, THOS., President's address 29
Members, list of new 23
MILLER, T. CLARKE, Sanitation and the Physician 105
Modus Operandi of Therapeutic Forces 159
Officers, list of, 1888 3
List of since 1846 243
Osteo-cancer, amputation 67
Physician and Sanitation 105
Place of meeting 16
Placenta, retained, Treatment of 179
Pharyngitis, Follicular 147
Physical causes of Insanity 79
Phytolacca Decandra 75
Pregnancy, Tubal 33
President's address 29
PROEHL, L. J., Obituary 235
Publication Committee. report 13
Railroaders, eyesight and hearing of 45
REAMY, THAD. A., Vaginal Hysterectomy 193
REED, C. A. L., Intra-peritoneal Hematocele 33
REED, R. HARVEY, Follicular Pharyngitis 147
Reports:
Ethics Committee 21
Finance Committee 10
Legislation Committee 12
Librarian 7
Publication Committee 13
Secretary 8
Treasurer 7

INDEX.

RICKETTS, B. M., Eczema Infantile 57
RUSSELL, JOHN W., Obituary 338
Sanitation and the Physician 105
Secretary's report 8
State Board of Health, resolutions on 15
State Board of Medical Examiners 15
Thanks, vote of, to officers, &c 22
Therapeutic Forces 159
THORN, S. S., Fractures of lower end of humerus 223
Treasurer's report 7
Tubal Pregnancy, hematocele 33
Tyrotoxicon 137
Uterine Hemorrhage 187
Vaginal Hysterectomy 193
Valedictory 24
VAUGHAN, V. C., Cholera Infantum 137
    Thanks to 17
Welcome, address of 5
Wisconsin, Communication from Sec. of State Med. Soc. of... 19
Whooping Cough 155
WRIGHT, J. A., Insanity 79